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ON BENZOATING OINTMENTS EXTEMPORANEOUSLY.

BY CHARLES F. BOLTON.

An Inaugural Essay.

The subject of benzoin in ointments has for some time past attracted the attention of the profession, and there is nothing in the whole range of Pharmacy that gives more satisfaction than a perfect ointment, not only to the druggist who dispenses it, but also to the physician who prescribes, and the patient who uses it. There is nothing that reflects more credit on the Pharmacist than an elegant and well dispensed ointment. To accomplish this requires not only experienced manipulation, but something more ; it needs that the unctuous matter should be fresh and free from the least trace of rancidity ; it should not only be this way when dispensed, but if possible should be made in such a manner that it would remain in a perfectly sweet condition for a considerable length of time, thus affording the patient an opportunity of using the whole of the ointment in a sweet state. This can be effected in many instances by using the officinal unguentum benzoini as the base of the ointment, but often the physician directs the ointment to be prepared and benzoated extemporaneously. To benzoate the ointment by the officinal process involves time, but by the plan that I suggest it can be accomplished in a very short time without the aid of heat, thus saving a great deal of time and trouble. In many instances time is quite an important object. The formula that I have decided upon, after making several experiments, is as follows :

R Benzoin pulv. (select.) ʒij.
Ether sulphuric ʒiv.
Ol. Ricini ʒj.

Introduce the benzoin into an eight ounce bottle, add the ether,

macerate for twenty-four hours with frequent agitation, pass through a filter, to the filtrate add *ol. ricini*, and shake until dissolved; then transfer to a shallow vessel in order to allow the ether to evaporate spontaneously; lastly, when the ether has entirely disappeared, place in a wide-mouthed bottle ready for use. With a view to economy I experimented with alcohol and benzine as solvents; the former of the specific gravity .817 gave moderate satisfaction, the result being of a much darker color, owing to the foreign matter in the benzoin being more soluble in alcohol than in ether; this I considered a serious objection, as it discolored the ointment considerably, while that made with the ether did not, at least not more than if it were benzoated by the official process. The benzine experiment, however, was a complete failure, it extracting from the benzoin only a very small amount of benzoic acid, leaving entirely undissolved the resin, cinnamic acid, and volatile oil. The result from the formula that I have given is of the consistency of a soft extract, one ounce of the extract fully representing an ounce of the benzoin in a state that is perfectly miscible with unctuous substances. I benzoated several ointments with this extract in the early part of last April, and allowed them the greater portion of the time to be exposed to the atmosphere, and when I examined them in the fall I could find none of them oxidized in the least, and in the case of *ung. hydr. oxidi rubri* the bright orange color was perfectly preserved. I also used it in several prescriptions and it always gave perfect satisfaction. I used it in the proportion of half dram to the ounce of ointment; it can also be used very advantageously in preparations for the hair, it being very soluble in alcohol and perfectly miscible with *ol. ricini* in combination with alcohol, but insoluble in the fixed and volatile oils in a free state. It is also freely soluble in chloroform.

NOTE ON AMYLO-NITROUS ETHER.

BY JOHN M. MAISCH.

Mr. C. Umney* has recently examined three specimens of nitrite of amyl as met with in the English market, and found them all to be impure, one containing in fact very little of the true nitrite. This new remedial agent has also attracted some attention in this country; to what extent it is made here I have no means of ascertaining, nor

* *Pharm. Journ. and Transactions*, Nov., 1870, p. 422.

am I prepared to give an opinion of the purity of the few samples I have seen. Since, however, its preparation is rather tedious, and since it is very apt to be contaminated with other ethers, the requisite care and precautions are probably not always applied.

Having had occasion, some time since, to prepare it repeatedly for medicinal purpose, the following remarks are offered as indicating a way of making nitrite of amyl on a convenient scale. Mr. Umney prefers the process of passing nitrous (hyponitric) acid into amylic alcohol. I regard this process as unnecessarily complicated, since purification by fractional distillation cannot be avoided as demonstrated already by Rieckher.* According to Bunge,† 5½ oz. amylic alcohol require from eight to nine hours, before becoming completely saturated with nitrous acid; volatile products are given off, and the residue contains nitrite and valerianate of amyl besides a black non-volatile body, crystals of nitrate of ammonia and probably nitrate of amyl. The process, which was first suggested in 1844 by Balard, it seems to me will answer all requirements, if the observations of W. Hoffmann‡ regarding the formation of nitrate of amyl are not disregarded; ethyl-amylic ether, amylic aldehyde and hydrocyanic acid are likewise formed.

Of the three last named compounds, the hydrocyanic acid is readily removed from the distillate by treatment with an alkali, which also separates any nitrous and nitric acid that may have come over. The aldehyde has its boiling point at 93° C. (Kopp) and the ether above 110° C. These figures indicate the necessity of the cautions recommended by Balard, Hoffmann, Rieckher, &c.

It is advisable to use only rectified amylic alcohol, since the previous removal of ethylic alcohol is much easier than the removal of the products after the reaction with the nitric acid has been completed. This purification is most readily and economically effected by Hirsch's method,§ with solution of table salt and subsequent distillation with water.

The purified amylic alcohol with about an equal bulk of nitric acid is introduced into a capacious glass retort, and a moderate heat is applied and very gradually increased. As soon as the mixture ap-

* Jahrb. f. pr. Chem. xiv, p. 1.

† Krit. Zeitschr. ix. 34.

‡ Ann. Chem. and Pharm. lxxv, 363.

§ See Amer. Jour. Pharm., 1862, p. 139, 328.

proaches boiling, the fire is removed and the reaction allowed to continue. If the application of the heat has been too rapid or too long continued, considerable frothing occurs and the contents of the retort are apt to foam over. With a moderate and slowly increased heat, the reaction is less violent and the temperature rises gradually, after the removal of the fire and the beginning of boiling. As soon as the thermometer, inserted into the tubulus, rises above 100° C. (212° F.) the receiver is changed, the distillate now becoming more and more mixed with ethyl-amylic ether and nitrate of amyl, readily perceived by the change in odor.

The distillate obtained below 100° C. is now agitated with an aqueous solution of caustic or carbonate of potassa, to remove free acids, and after separation the oily liquid is introduced into a clean retort and again slowly heated. The first portion coming over contains the amylic aldehyde. When the very slowly increased heat has risen to 96° C., the receiver is again changed and the distillate now collected as nitrite of amyl, until the thermometer reaches 100° C., when the distillation is stopped.

It will be observed that the process for the preparation of this compound consists of two distinct operations: first, the production of the amylo-nitrous ether, and, secondly, its purification. In both operations the *very gradual* application and increase of heat is very essential. The yield is small; not having kept any record of the yield, I am unable to give the per centage obtained. All the amylo-nitrous ether dispensed by me was made by this process.

After the publication of Redwood's process for spirit of nitrous ether,* it was repeatedly tried with entirely satisfactory results, and the idea naturally suggested itself to apply the same process to the similar compound amylo-nitrous ether. Accordingly amylic alcohol was mixed with sulphuric acid, the mixture introduced into a retort together with some copper wire, and, after cooling, nitric acid was added. In a very few moments the evolution of gas was observed, the liquid became hot without the external application of heat, and the reaction very rapidly increased to such a violence that the entire charge was lost, it being impossible to condense any vapors in a Liebig's condenser, or to retain much of the liquid forced over, in the receiver. The experiment was never repeated.

* See Amer. Jour. Pharm., 1867, p. 330.

Nadler* gives a process which he says readily yields the pure nitrite; it having come but lately under my notice, I am not prepared to speak about its merits; it consists in distilling amylo-sulphate of potassa with nitrate of potassa.

The composition of the nitrite of oxide of amyl is $C_{10}H_{11}O, NO_3$; it appears to me that we ought to discontinue this long name, as well as also nitrite of amyl. Amylo-nitrous ether expresses the chemical relations of this compound, and the similarity of names also indicates its analogy to the officinal ethylo-nitrous ether, which may well be continued to be called nitrous ether, just like ethylic alcohol and all its direct derivatives are called by their generic names merely—alcohol, aldehyde, ether—without any prefix.

THE DOCTOR AND THE APOTHECARY.

BY WM. L. TURNER.

The relation to each other of doctor and apothecary has been a subject of considerable comment, generally assuming the character of a two-sided question, the affirmative or negative of which has depended mainly upon the sympathies or pecuniary interests of those who have entered into the discussion. It occurs to mind, however, that it is a question differing somewhat from the one as to "which side of the jug the handle should be on," differing in the fact that a third question is necessarily involved. It is no uncommon thing, on the one hand, to hear urged against apothecaries the complaint of "prescribing over the counter," as though the pecuniary interests of physicians were the only matters or interests with which apothecaries had to deal, entirely superseding their own or that of their patrons; while, on the other hand, apothecaries complain of physicians for prescribing special articles and special establishments, as though it were the paramount duty of physicians to see that every one who chose to start a drug store should be properly sustained and supported, entirely ignoring the important fact that those from whom both derive their support, and for whose benefit only either becomes a useful appendage to society, have rights, which not only entitle them to some consideration in determining this question, but which both are bound to respect; for instance, it is simply absurd to say that an apothecary

* Ann. Chem. und Pharm. cxvi, p. 176.

should not recommend a simple remedy for a cough, when the person requesting the same can purchase anywhere a remedy for which he has no other guarantee than an advertised list of wonderful cures; or it is equally absurd to suppose that a physician is in duty bound to prescribe only such remedies as he may know or even suppose to be in every drug store, without regarding the requirements of his patient, or his own choice.

But this question of relation to each other does not end here, but assumes another phase, and has become to some extent involved in the issues existing in the medical profession—differences too frequently only of opinion, which in some instances have no better foundation upon which to build than the hobby of some one remarkable only for having a hobby. There may be those who prefer to be free to act out their part upon the stage of life free from the restrictions or supposed technical proprieties of organized associations, or associated organization, who may by choice prefer, or by necessity be compelled, to work out the problem of life, or ascend the hill of fame, depending exclusively upon their merit or good fortune. There may be others who prefer to surround themselves by such influences and conventionalities as they may deem essential or politic; or deem it of more importance to transmit a fame acquired by others, than acquire fame themselves. What have apothecaries to do with these divisions, that they should array themselves on the side of one and against the other? Is there any necessary connection between the doctors and apothecaries, that will justify a sympathy on the part of the latter with any preposterous proposition, or absurd abstraction, that may tend to concentrate the few or separate the many of the former? I know that various attempts have been made to create an impression that Pharmacy is merely a collateral branch of, or dependent attachment to, medical science. To such an extent has this attempt been made in some localities that medical men have assumed to prescribe under what legislative restrictions Pharmacy should exist. This attempt has not been made by medical men only; pharmacists themselves, in some instances, have taken up the cudgel and battered away in defence of some pet theory of medicine, thus identifying themselves with this, or following in the wake of that, as though it were a proper subject of investigation, where pharmacy should be located or to what subdivision of medicine it should be attached. Is pharmacy to be confined to one or more beaten paths? Shall it be

denied the privilege of entering newly opened avenues and positively forbidden to open any itself? As astronomical science knows no bounds, but embraces the universe, so let pharmacists at least regard medical science as embracing all medical knowledge.

ON A NEUTRAL CRYSTALLIZABLE PRINCIPLE IN BLACK
SNAKE ROOT—(CIMICIFUGA RACEMOSA.)

BY T. ELLWOOD CONARD.

An Inaugural Essay.

As this plant is a very common one, and has been fully described in articles heretofore written, I will not enter into any description of it, but merely state the condition of the root acted upon; and of the very many experiments made I will give those only which resulted most satisfactorily.

In order to get the advantage, if there should be any, in using the perfectly fresh root, I obtained it in this way directly from the ground. It was dug in the latter part of July, at which time the roots were quite well developed.

A portion of these, thoroughly cut and bruised, were put in a still with water, and a varied and continued heat was applied, but without producing in the distillate any perceptible amount of volatile principle. The addition of liquor potassa to the mixture and redistillation was tried, which also failed to develop a volatile oil or other substance; there was no separation of anything from the water which distilled over, nor had it any taste or smell, except an earthy, rooty taste, characteristic of any inert vegetable matter. From these facts we infer the root does not owe its active properties to the possession of a volatile substance.

The next experiments I will give in outline. Three and a half pounds of the root, cut and bruised, were treated with four and a half pints of strong alcohol by maceration for four weeks and filtered. Two pints of this tincture was treated with three fluidounces of the solution of subacetate of lead, which completely precipitated the resin, tannin, etc., and most of the coloring matter, as will be seen below. The lead was separated from the filtered liquid by means of sulphuretted hydrogen in excess; after agitating for some time together, filtered. A repetition of the process proved the solution to be entirely free from resinous or gummy substances, also from much coloring

matter. The tincture was set aside and allowed to evaporate spontaneously. The resulting powder was treated repeatedly with benzine. The several washings were mixed and evaporated, yielding a minute portion of a disagreeable, nauseous, fatty substance without color. The *powder* was freed from the odor of benzine, placed on a filter and thoroughly washed with water; then dried and dissolved in sixteen times its weight of strong alcohol, forming a saturated solution. This was mixed with one hundred and twenty grains of pure alumina, moistened with a few drops of water, and agitated for twenty-four hours. Then put in a capsule and evaporated spontaneously to a very dry light mass. This was put on a filter and hot alcohol poured on it until entirely exhausted. This was allowed to evaporate, and there remained a crystalline substance of a light yellow color, not of a very regular or decided shape, but of a massy appearance, resembling almost exactly the crystals of sulphate of alumina on a small scale. But under the microscope, at a low power, their crystalline form was more distinct, presenting an appearance similar to that of rock candy. This substance in powder has little taste, on account of its extreme insolubility in the liquids of the mouth. But its solution in alcohol has the intensely acrid and sharp taste that characterizes recent cimicifuga.

The crystals have the following characteristics: They are very soluble in cold alcohol, more so when heated. Dissolve readily in dilute alcohol, also in chloroform, and slightly in ether; but are entirely insoluble in benzine, turpentine and bisulphide of carbon. Fusible at a moderate temperature, at a higher taking fire, and at a red heat entirely dissipated.

This substance, from the following experiments and their results, appears to be a neutral principle:

A small quantity moistened on a jar lid with liquor potassa, and approached with the stopper of a muriatic acid bottle did not give off the characteristic white fumes of a volatile alkaloid, nor did it produce fumes when heated with liquor potassa and brought near muriatic acid, as an ordinary alkaloid. A small quantity with liquor potassa put in a tube with a small outlet, was gently heated, but no odor of ammonia was given off. Reddened litmus paper remains unchanged by continued contact with its solution. Entirely incompatible with all acids refusing to unite with them in any form or proportion. These few facts point very strongly to the conclusion that it is neither an

alkaloid nor an acid principle, being entirely indifferent to the alkalies and not reddening litmus paper. The therapeutic properties of this substance have not been ascertained.

ON THE USE OF LIQUID CAOUTCHOUC AS AN ADDITION TO
EMP. BELLADONNÆ AND OTHER PLASTERS.

BY J. WILLITS WORTHINGTON.

The author has treated this subject at some length in his Inaugural Essay before the Philada. College of Pharmacy, from which we abstract the following :

Much difficulty has been experienced by pharmacutists in preparing belladonna plaster so as to retain its adhesiveness when kept ready spread for some time. The proposed improvement consists in the addition of india rubber used in the form of a solution, made as follows :

Take of pure Caoutchouc, cut in small pieces,	an ounce.
Benzine (from Petroleum),	a pint.

Macerate with occasional agitation in a suitable stopped, wide-mouthed bottle until a thick, saturated solution is obtained. To prove its efficacy in preserving the pliability of plasters, the author prepared a mixture of 3 ounces of Burgundy pitch, 4 drams of yellow wax, 2 drams of rosin and 2 drams of lard. Melted and strained. This, when spread and kept two months, became very brittle and cracked on handling.

The same ingredients, with the addition of 4 drams of liquid caoutchouc incorporated when they were in a fused state, possessed the following characters :

Very little tendency to crack, retains its pliability, is more adhesive, and has a beautiful, smooth, glossy appearance. After two months, part of it very cold weather, this plaster retained its pliability.

Experiments were then made with officinal belladonna plaster, which resulted in the following proportion being considered most suitable :

Take of Belladonna plaster (U. S. P.),	seven drams.
Liquid Gum Elastic,	one dram.

The belladonna plaster to be melted by a water-bath, and the liquid rubber then added and stirred well until united thoroughly.

The odor of the benzine disappears when the solution is added in this way. It is quite important to avoid an excess of heat, and hence the water-bath is recommended.

Liquid rubber will be found to act admirably in all plasters which may be made to keep through the summer.

CALOMEL.

By OSCAR OLDBERG, Professor of Pharmacy, Washington, D. C.

It is a rule, generally adopted by compilers and revisers of pharmacopœias and pharmaceutical formularies, to select, for officinal works, such formulæ and processes as will be most practicable to the pharmacist proper. Pharmacopœias are not written for wholesale manufacturers. For such preparations as can be more profitably prepared on a large scale, no officinal formulæ are, therefore, given in many pharmacopœias; and out of two processes, which both give an equally good product, we should certainly prefer the one which is most economical and least troublesome.

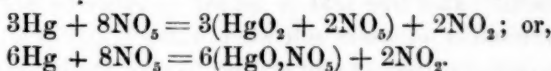
I do not believe that our national pharmacopœia has done wisely in the selection of its formula for the preparation of the mild chloride of mercury. The process in question is too troublesome to be adopted, even to a small extent, by the apothecaries; and, besides, there exists another formula which is more convenient, while, at the same time, it gives also a more beautiful product. The process of the U. S. Ph. is familiar to us all. The other method is officinal in several foreign pharmacopœias, among which may be mentioned those of Sweden and of Saxony. The U. S. Dispensatory seems, however, to ignore it altogether, though it is nearly a century old, and has been considerably improved since first brought into notice by Scheele. It directs the preparation to be made by precipitation.

Professor Wood, after speaking of Wöhler's wet process, adds: "This form of calomel is of doubtful utility; and, when obtained by Prof. Wöhler's process, it is a crystalline powder, which is a fatal objection to it." Is not the sublimated calomel made according to officinal directions of the U. S. Ph. also crystalline, and as fatally objectionable? The products of both these formulæ must undergo a tedious process of levigation and elutrition, to enable us to reduce them to an impalpable powder, and free them from the contamination of bichloride.

The British process, when carried out by experienced hands, is a good one, but by far too troublesome. The truth is that nearly every pharmacist purchases his calomel from the wholesale druggist, which is by no means advantageous to the art. It is obvious that we must either follow the British formula or fail to compete with the British, as long as no better process is presented to us than the one now official in our country. I think it might have been just as well not to give us any formula at all, but to simply direct us to purchase the preparation as obtained by Jewell's or Soubeiran's processes, (or rather Henry's and Mohr's,) and to test that conscientiously before using it, although Prof. Wood thinks it is "free from all suspicion of containing corrosive sublimate."

Let us have, when such a thing is possible, practical formulæ which will be adopted by a greater number of apothecaries.

When metallic mercury is dissolved in nitric acid, the resulting salt is, according to circumstances, either a protoxide or a peroxide salt.



When the acid is warm, concentrated and in excess, the peroxide salt is formed; but when it is cold, dilute, and in a less quantity than is necessary, in order to dissolve all of the metal, the result is a proto-salt. Therefore, also, if a solution of a mercurial persalt is macerated with metallic quicksilver, some of the metal is taken up which reduces the peroxide to a protoxide.

The salt which is obtained, when dilute acid acts on the metal at a moderate temperature, is the neutral protonitrate, and can be obtained in a crystalline state; according to the younger Mitscherlich, some basic salt may be simultaneously produced, if the metal is present in great excess, and the maceration is allowed to go on for a longer period. When a more elevated temperature is applied, a neutral proto-salt (together with more or less per-salt) is *first* formed, but, under the continued dissolution of the metal, more and more basic salts are successively generated.

All those salts are soluble, in certain proportions, in water, but decompose upon a further addition of that solvent, so that a yellow overbasic salt falls, while an acid one remains in solution. But, if free acid be added to their solutions previous to dilution, no precipitate or decomposition will take place.

Applying these preliminaries, we will soon arrive at a working formula for calomel, which, from experience, I do not hesitate to recommend as preferable to the process of the U. S. Ph.

One pound of pure nitric acid (spec. grav. 1.25) is put in a matrass, heated by means of a sand-bath, and one and a half pounds of mercury (or an excessive quantity) is added. They are warmed together first until no more red fumes are evolved, and afterwards the digestion is continued for one hour more, or until the liquid begins to become discolored or yellowish, when the matrass must be at once removed, and the contents transferred to a capacious evaporating-dish. The solution now contains a basic proto-nitrate. (The digestion must not be interrupted, because crystals may deposit which are afterwards very difficult to re-dissolve.)

To the warm concentrated solution in the evaporating-dish is now added, without delay and during constant agitation, a boiling hot mixture of twelve pounds of distilled water and half pound (more) of the nitric acid. This free acid is added, in order to prevent subsequent precipitation of basic salt when water is mixed with the solution. The mixture, thus diluted and made sour, should now be tested, to ascertain that it can be further diluted with water without decomposition, because, otherwise, basic salt may be thrown down with the calomel when the solution is finally added to the dilute hydrochloric acid. The solution is next filtered, to free it perfectly from all basic salt which may be undissolved. (This operation is, of course, not performed until the liquid has first become cold.)

The precipitation now follows by pouring the clear, cold, filtered solution of basic protonitrate of mercury into a mixture of one and three-quarter pounds of hydrochloric acid, (spec. grav. 1.18,) and twenty pounds of water, stirring uninterruptedly. The precipitate is washed by decantation, and the washing afterwards finished on a filter. It is necessary that the mercurial solution should be added to the dilute acid, and not *vice versâ*, in order to prevent the possible contamination of the preparation with protonitrate.

The preparation obtained in this manner is a snow-white impalpable powder, which, if it has been well washed, is as perfectly free from bichloride and basic nitrate of mercury as Jewell's hydrosublimate of mercury.

PHARMACEUTICAL TITLES.

BY THE EDITOR.

The value set upon titles varies much with individuals; so much, indeed, that many will work more earnestly for a title than for more important things. If their possession carried with it the knowledge and dignity which, sometimes, it is presumed to represent, then titles might well be sought for as desirable evidence of accomplished work. Unfortunately, in very many instances, there is no such relationship. An esteemed correspondent in a neighboring city writes: "There is quite a discussion going on here about the title proper for graduates. Some agree that 'Doctor in Pharmacy' would be most correct, but others consider that improper, 'because not usual.' It would be interesting to have an opinion expressed in your Journal," &c.

Accepting the invitation, we will suggest that it is desirable to avoid the adoption and use of any titles, for common use by pharmacutists, that will conflict with those of the medical profession. Pharmacy is, to a large extent, an *Art*, which every well-qualified apothecary *masters*. Its pursuit involves so much scientific knowledge, that it may very properly be called a profession, and he who properly practises the art is a *Master in Pharmacy*. This title, however, should not be given to the major part of graduates, as they now issue from our schools of pharmacy, who should be satisfied with the probational title of *Graduate in Pharmacy*, (or, perhaps, *Bachelor in Pharmacy*), until, by a certain length of service as assistants or principals, they acquire that thoroughness arising from experience and responsibility which justifies them in assuming the title of Master in Pharmacy. Whether this assumption should be preceded by another examination and certificate, or whether the lapse of a given time in the practice of pharmacy should be considered sufficient, would be questions for the Faculty to decide. Our own opinion is that the title would carry more weight with the public, and be more esteemed by the owner, if it had been properly earned and certified to by authority. When, however, the title Doctor in Pharmacy is not intended for every-day use, but is made entirely *honorary* and its being conferred on an individual is intended to express the favorable appreciation, by the conferring body, of his labors, or qualities, or acquirements, its use is not obnoxious to the objection above stated, any more than is the honorary title of LL.D. to the various classes of persons who have received it from our Universities.

Let our young men, therefore, be moderate in their desire for titles, until thoroughly deserved; let "excelsior" be on their motto; and let our Institutions, by proper examinations, and by giving titles only to the deserving, screen out the incompetent, probationize the mediocre as graduates or Bachelors, and elevate the qualified and intelligent student to a Mastership in Pharmacy. Such of the graduates as could subsequently raise their *status* by earnest study and skilful practice should be eligible for the Mastership, to be attainable by an examination.

It is time that the line of distinction between pharmacutists and wholesale druggists, in regard to educational requirements, should be clearly drawn. It is wrong to expect a druggist to know the numerous practical details of a dispensing business when he has had no opportunity to acquire them; and it is doubly wrong, in the absence of this knowledge, to consider him eligible for the diploma of a pharmacist, which he may attain by dint of study and cramming. The druggist should have a proper diploma for his attainments in chemistry, materia medica and manufacturing pharmacy, but he should not receive a certificate asserting his having served an apprenticeship to the apothecary business, and is qualified to conduct it.

PHARMACEUTICAL NOTES.

BY W. RANSTEAD JONES.

Editor Amer. Jour. Pharmacy:

Dear Sir:—I beg leave to submit the following to your consideration, for the benefit of the craft, for the extemporaneous preparation of

Tinctura Opii Camphorata.

Take of Tinct. Opii,	.	.	3iij	3ijss.
Spts. Camphoræ,	.	.	3j	3ij.
Ol. Anisi,	.	.	3ij.	
Acid. Benzoic.,	.	.	3ij.	
Alcoholis,	q. s. ft.	.	Oij.	Mix.
Mel. Despumat.,	.	.	3iv.	troy.
Aquæ,	q. s. ft.	.	Oij.	

Mix the two solutions together, and filter through paper. Of course the tinctures are to be of the officinal strength. The actual relation of camphor and opium in this and the officinal recipe is as follows:

	In my formula.	Formula 1866, U. S. P.
Camphor, . . .	grs. 82½.	grs. 80.
Opium, . . .	grs. 123½.	grs. 120.

The other ingredients are identical in quantity.

Aromatic Essence of Ginger.

R	Ginger, . . .	℥xii.
	Cinnamon, . . .	℥i.
	Cardamon Seed, . . .	℥ss.
	Cloves, . . .	℥iij.
	Capsicum, . . .	℥iij.

All in moderately coarse powder.

Alcohol, . . . Oiv.

Proceed as directed for Tr. Zingiberis.

The above makes a very agreeable form of tinct. of ginger.

I would also suggest that some suitable character or sign be used to denote either ℥ or 3 different from the one now used. I find many of the errors in prescriptions are caused by the confounding or indistinct writing of the two characters ℥ and 3.

Mt. Airy, Philada., Feby. 24, 1871.

GLEANINGS FROM THE GERMAN JOURNALS.

BY JOHN M. MAISCH.

Oil of Rue.—A. Giesecke observed that the crystalline mass obtained by shaking oil of rue with bisulphite of carbon cannot be completely freed from the carbohydrogen by expression, and that it is decomposed by a moderate heat. The carbohydrogen was removed by fractional distillation, repeated thirty times, and the oxygenated portion, boiled then constantly between 225° and 226° C., had a spec. grav. = 0.8268 at 20.5° C., a slight odor of pine apple and a bluish violet fluorescence in reflected light; its composition was $C_{22}H_{22}O_2$; it congealed at + 6°, and fused again at 15° C. Boiled with bichromate of potassa and dilute sulphuric acid, it yielded only pelargonic and acetic acids. Nascent hydrogen, generated by gradually introducing thin slices of sodium into a mixture of the oxygenated portion and alcohol, produced, among other compounds, hendecatylalcohol, $C_{22}H_{24}O_2$, which is a colorless liquid, insoluble in water, of the consistence of glycerin, and spec. grav. 0.8268.—*Zeitschr. f. Chemie*, 1870, Septb. 428—431.

Cholesterin in Wool Fat.—Ernst Schulze has proved the correctness of Hartmann's inference that this fat contains cholesterin. He

obtained the fat by exhausting sheeps' wool with ether. The fat was saponified, in the usual way, with potassa solution and table salt; the mother-liquor contained no glycerin. The soap was exhausted with ether, which on evaporation left 70 per ct. fat; this was boiled in a closed vessel with alcoholic solution of potassa, and then exhausted with ether. The residue left on evaporating the ether was repeatedly recrystallized from spirit of ether (1 ether to 3 or 4 alcohol), and was then pure cholesterin.—*Ibid.* 453—455.

Quiniometry.—Dr. E. A. Van der Burg criticizes de Vrij's method of determining the quantity of the alkaloids in cinchona bark, and corroborates his own results obtained in 1865. He proves that de Vrij's improved method* yields only about two-thirds of the alkaloids contained in the bark; that the balance remains mainly in the bark, and also in the alkaline liquor; that at present we possess no method for even the approximately correct separation of the cinchona alkaloids; that assays giving the composition of cinchona bark to the thousandth per cent. of the different alkaloids are unreliable, and that the main cause for the varying results of different chemists in analyzing the same bark must be looked for in the methods followed by them.—*Zeitschr. f. Anal. Chem.* 1870, ii, 179—203.

As a remedy for diphtheria, Dr. Rothe, of Altenburg, recommends the following: *Acidi carbolici, alcoholis aa 1·0, tinct. iodin. 0·5, aquæ dest. 5·0 m.* The mixture is applied three times daily to the affected parts of the throat, and the removable membrane is detached with the same brush, so that the mixture touches the mucous membrane. The patient also uses a gargle of water, to a teacupful of which from 10 to 15 drops of the mixture is added. In severe cases the application is renewed every three or two hours, if possible, also during the night. Dr. Rothe relates 15 cases, of which but one terminated fatally, and in this the diagnosis "diphtheritis" was doubtful.—*N. Jahrb. f. Pharm.* 1870, Juli, 46, from *Apothekerzeitung*.

Dialyzed Oxide of Iron.—Berlandt in Bucharest recommends to inclose solution of sesquichloride and oxide of iron in a well washed hog's bladder, the opening of which connects with an open glass tube of 10 m. m. diameter; the bladder is suspended in a beaker filled

*10 grm. powder percolated with dilute muriatic acid, to obtain 150 c. c., the liquid decomposed with NaO, and agitated with ether.

with water, and the liquid dialyzes completely in eight days.—*Archiv d. Pharm.* 1870, Oct. 9.

Preparation of Coca.—Dr. Ullersperger (N. Repert. f. Pharm. 1870, Octbr. 631—633) brings to the notice of the German pharmacists and physicians eight preparations of coca made by A. Dante Ferroni, in Florence.; namely, three syrups, troches, arrowroot, wine, chocolate and balsam. These preparations evidently belong to that class of nostrums of which the pretended composition is given without the process.

Resin of Tampico Jalap.—Prof. H. Spirgatis calls it tampicin; it resembles convolvulin, the resin of true jalap, in appearance, but is soluble in ether, like jalapin, the resin of fusiform jalap, from which, however, it differs in composition; it is a glucoside, and undergoes by chemical agents changes analogous to those occurring under similar circumstances with the other two resins named. The composition of tampicin is $C_{63}H_{54}O_{28}$. Its medical properties are similar to those of true jalap resin, but it appears to be less reliable. On account of the small quantity of resin which tampico jalap contains, and the greater loss of alcohol, its cost is higher than that of convolvulin.—*N. Repert. f. Pharm.* 1870, Aug. 452—459.

CONEIN.

Prof. J. Lawrence Smith kindly sends the following very interesting item translated from the *Bericht. Deut. Chem. Gesell.*, December, 1870:

“*The first artificial production of a Vegetable Alkaloid (Coniin) by Hugo Schiff.* This alkaloid has been heretofore only known as the product of the plant. For some months he has been engaged in examining the reaction of ammonia and the aminobases on aldehyde, and one of the products then discovered was *butyric aldehyde*. Latterly he has been examining the reaction of an alcoholic solution of ammonia in this butyric aldehyde at a temperature of 212° Fahr., and from this he obtained two bases, which he calls Tetrabutyraldin and Dibutyraldin. By heating this last until it distills, the first product is a neutral oily substance; and the substance which comes over last is a strong alkaline base that proved to be coniin, having the poisonous and other physiological properties of the natural coniin. The amount produced is yet small and costly; but the history of chemistry

shows that the demand for its products is the greatest stimulant to increased production and cheapening cost. In this is to be seen a decided step toward the artificial production of morphine, quinine, etc.—*American Practitioner*, March, 1871.

OBSERVATIONS ON THE MANUFACTURE OF VERMILLION.

By M. ALSBERG, PH. D.

In the process of manufacturing vermillion by Martin's method (agitation of quicksilver, sulphur and alkaline sulphuret), two different stages can be easily distinguished; first, the combination of mercury and sulphur to the black sulphide; and secondly, the conversion of this amorphous black modification into the crystalline red. The chemical combination, as well as the crystallization, is accompanied by the evolution of considerable heat, which may become so great, especially during the latter stage, and when working in closed vessels, as to give rise to dangerous explosions.

The crystallization, a consequence of the solubility of the black sulphide in the alkaline sulphuret, and its gradual precipitation in the red form, only takes place when the mass is warm. If it be kept cold it requires a great length of time, often weeks, and even months, until the crystals are formed. If, on the contrary, the crystallization has once set in (this is indicated by the black mass turning brown), it is generally finished within twenty-four hours. In the case of the slow crystallization, there are sometimes crystals obtained, which, in color and form, greatly resemble the native ore; the same crystals are occasionally formed when the solution of alkaline sulphuret containing sulphide of mercury is concentrated. Professor J. P. Cooke, Jr., of Cambridge, who examined some crystals of that kind, says:—"They were rhombohedra, approaching a cube, and have the peculiar form of macling, which is so characteristic. They are, doubtless, the primitive rhombohedra observed on the native crystals, R on R $92^{\circ} 36'$. The faces are striated parallel to the basal diagonal of the rhomb face, and the crystals are terminated by the plane of a more obtuse rhombohedron of the same order."

The solubility of the sulphide of mercury in the alkaline sulphurets is considerable, especially when the fluids are concentrated, and then even in the presence of polysulphurets. This solution cannot be diluted without the sulphide of mercury being precipitated in the black

modification, but the precipitation may be prevented by the addition of a small quantity of caustic alkali.

Evidently this is the reason that Weber says that sulphide of mercury will dissolve in alkaline sulphurets only in the presence of free alkali, whereas solutions of the alkaline sulphurets, containing so much sulphur as to look deep red or brown, will readily dissolve enough of the sulphide to give, on dilutions, a considerable black precipitate. The precipitate does not always form immediately, but invariably makes its appearance after a short lapse of time.

The solubility* of the sulphide of mercury constitutes the chief source of loss in the manufacture of vermillion, and, on an average, amounts to from five to eight per cent. of the mercury taken.

In spite of all precautions, it will sometimes happen that the mercury "flours," and, as it seems, every minute globule is coated with a thin layer of sulphide. This coat not only prevents the conversion of the metal into the sulphide, but even its solution in nitric acid. If concentrated nitric acid be used, the whole of the sulphide and metal is dissolved, whereas dilute nitric acid has no effect at all. Concentrated hydrochloric acid, especially when boiling, will readily decompose the sulphide.

As it is well known, no vermillion will withstand the action of the light; it turns dark and gradually black again. Whether this change is due to the decomposition of the sulphide into the sub-sulphide and free sulphur, or simply to the conversion of the crystalline into the amorphous modification, is doubtful; but it is certain that any impurities increase this tendency, especially the presence of free mercury, which seems to indicate that a decomposition does take place, though always only on the surface. Even the passing of steam or the evaporation of a drop of water over some vermillion will often rapidly effect this change of color. Of course, the value of the vermillion greatly depends on the stability of color, and therein the different articles of commerce vary greatly. Some will retain their brightness for several years, while others may be seen to change after a few weeks. If, perhaps, the vermillion obtained by sublimation is a little more stable than that manufactured by the wet process, it certainly, with

* It is generally stated that sulphide of ammonium does not dissolve sulphide of mercury, but, judging from the fact that, according to Liebig and Gautier Bouchard, sulphide of ammonium effects the crystallization of the black sulphide, it seems probable that this statement is not quite correct.

respect to brightness and fire, does not sustain comparison with the latter; therefore, the latter constantly gains more ground. The different shades, from a deep red almost to an almost light orange, are simply a consequence of the size of the crystals; the larger the crystals, the deeper the color, and *vice versa*, so that large crystals resemble, in their cochineal color, the native cinnabar.

Until a few years ago, all the vermillion used in the United States was imported mostly from Europe, and some from China, but now our own manufacturers have defeated foreign competition, when taking into account the high price of labor, &c. The protection by duty is very small, but not only have our manufacturers successfully competed with Europe, but they have even reduced the price considerably, thereby again increasing the use of their product. It may be safe to say, that the annual production in America amounts to 500,000 lbs., and may, before long, reach 1,000,000 lbs. The precarious condition of the California mercury mines may place our manufacturers in a dangerous position, compelling them to obtain their supply of mercury from Spain, at a greatly increased cost. Already, within the last six months, the price of mercury has risen fully 35 per cent., and, as the mercury trade is a monopoly, it may go higher still.—*Chemical News, London, February 17th, 1870, from the American Chemist.*

MAGNIFICENT FLUORESCENCE OF PEPPERMINT OIL.

By PROFESSOR FLUCKIGER.

50 to 70 drops of peppermint oil shaken with one drop of nitric acid, about 1·2 sp. gr., turn faintly yellowish, brownish, and, after an hour or two, exhibit a most beautiful blue-violet, or greenish-blue color, when examined in transparent light. When observed in reflected light, the liquid is of a copper color, and not transparent. If the mixture is warmed, the green or blue coloration takes place speedily; it may also be immediately provoked by adding a greater amount of nitric acid, say 1 drop to 19, or 9 drops of the essential oil.

Bisulphide of carbon contributes in no way to improve the test. All the various specimens of peppermint oil at my command show the same behavior, but the blue or greenish-blue hue exhibits very appreciable differences, which ought to be further examined by chemists

possessing authentic specimens of the oil under notice. A very old specimen of an originally excellent English oil, however, was no longer colored.

The color which peppermint oil thus acquires is remarkable on account of its persistency, for it lasts a week or two, at least in cold. Yet, unfortunately, it appears not capable of being applied as a true test; an admixture of 5 per cent. of oil of turpentine, for instance, does not at all prevent peppermint oil from assuming the blue or green color; on the other hand, I have not as yet met with any other oil partaking of the same behavior; carven, the more volatile portion of caraway-oil, also acquires a slight similar fluorescence, but by no means comparable to the above-described as regards purity and intensity of color.

Peppermint oil, which has become colored in this way, is quickly decolorized if shaken with carbonate of calcium; granulated zinc likewise causes it slowly to turn brownish. Spectroscopic examination of the colored oil furnishes no phenomena of particular interest. Chromic acid, dissolved in chloroform, does not perform the same reaction as nitric acid.—*London Pharm. Journ.*, February 25th, 1871.

CASTOR-OIL SOAP.

By F. M. RIMINGTON.

It is somewhat remarkable that our present English pharmacy has no pure medicinal soap possessing any characteristic property or medicinal activity. The ordinary Castile soap, being that which is commonly used for that ordered by the Pharmacopœia, can scarcely be considered a satisfactory article when we consider its composition and the mode of its manufacture. Having recently had occasion to direct my attention to this subject, it occurred to me that castor-oil offered some advantages, and would yield a soap possessing qualities very desirable in an article which so frequently formed the medium or adjunct for administering other active remedies. On putting this idea into practice, I found that a soap prepared from this oil has rather marked qualities, but my opportunities do not afford me the means of properly testing its medicinal properties. I believe it will be found that it has sufficient aperient power to relax the bowels when taken consecutively for several days, but I believe its greatest value will be found as an adjunct to other aperients. This at least

is the result I have arrived at. It is, of course, well known that the purgative principle of castor-oil has been ascribed by Soubeiran to the existence of a supposed oleo-resin, and that the ricinoleic acid is extremely acrid. I find when the oil is saponified that this acrid principle is either entirely or partially liberated, and does not continue masked as it is in the oil in its natural state, nor neutralized, as might be expected, by the alkali. It is to this fact, I think, we must look for any active property this soap may possess; and here I must leave the matter for the further investigation of the medical and pharmaceutical professions. The physical properties of the soap are in its favor for use in medicine. It has a clean yellowish-white color, is free from smell; it soon becomes dry, hard and is easily powdered; it has no tendency to soften or deliquesce on exposure to the air. In proof spirit it makes a perfectly clear and colorless solution, with only a little sediment. I shall forward a specimen to the Society for the inspection of those who may feel interested.—*London Pharm. Journ.*, February 25, 1871.

ODOFORM.

By J. HENRY CARSTENS, M. D.

As to some of the readers of the *Review* the mode of preparing this article, while to others its therapeutic uses may be of interest, I may be allowed to write a few words about this compound, which has come into such sudden and extensive demand.

Teriodide of formyl, or sesquiiodide of carbon, as it was formerly called, has a chemical composition of CHI_3 . It was discovered in the year 1822, by Serullas, who procured it by adding chlorinated lime to an alcoholic solution of iodide of potassium. Claimed by Dumas to be analogous to formic acid, the iodine taking the place of the oxygen (also, chloroform and the like preparations).

A good method for making this compound is given by Wittstein. Two parts of carbonate of potassa, two parts of iodine, one part of alcohol, and five of water, are mixed in a retort, which is then heated by means of a water-bath, till the contents are perfectly colorless. After the retort has cooled, the liquid is poured into a beaker and allowed to settle. The yellow, scaly mass is then collected on a filter, washed thoroughly with water, and dried between filter-paper. Reaction (according to new nomenclature): $6 (\text{K}_2\text{CO}_3) + 16 \text{I} + 2 (\text{C}_2\text{H}_5$

HO). Five atoms of oxygen of the carbonate of potassa join 2 (C_2H_5 HO), forming $2 (HCHO_2) + 3 (H_2O) + 2 (CH)$. 2 ($HCHO_2$) combines with $K_2O = 2 (KCHO_2, H_2O)$ while $10 K + 10 I = 10 (KI)$, and 6 I and the 2 (CH) of the alcohol form 2 (CHI_3), carbonic acid escaping.

According to this, the gain of iodoform would be 38 per cent.; but the reaction never takes place so completely, and we must remember that all these changes take place at once, and that iodoform is very volatile (must never be made in an open vessel) the alcohol evaporates, and must be used in larger quantities; the excess of carb. of potass. does not retard, but seems to increase the reaction.

By using six ounces of iodine, only one ounce of iodoform is collected, or about 17 per cent. It would therefore be very expensive if we could not make use of the filtrate for making iodide of potassium. This liquid contains, besides traces of iodoform, the balance of the iodine as iodate of potassa and iodide of potassium, and also formate and carbonate of potassa.

Evaporate this solution to dryness, and triturate with one-eighth of its weight of charcoal, and then heat to redness for a short time in an iron crucible, then digest in alcohol and filter; the residue is carbonate of potass., while the filtered solution contains the iodide of potassium; the alcoholic solution is evaporated, and allowed to crystallize. By this means no iodine is lost, and teriodide of formyl ought to be not more expensive than iodine.

Iodoform appears in the shape of yellow, shining, six-sided scales, with a spicy odor (like saffron or iodine and chloroform); is volatile at ordinary temperature. Almost insoluble in water (one part in 13,000), but more so in alcohol (one part in 80). If it be used in a mixture, must avoid alcoholic solution of potassa, which decomposes it, forming formate of potassa and iodide of potassium: $CHI_3 + 2 (K_2O) = KCHO_2 + 3 KI$.

Besides the well-known effects of iodine and its preparations, iodoform has the advantage of the former preparation of being stronger and more uniform in its action on the system; that is, does not corrode, nor act as a local irritant, and that, therefore, it may be given uninterruptedly. It is anodyne, and, consequently, often useful in neuralgia; produces, also, a local and partial anæsthesia of the colon. It has less anæsthetic powers than chloroform, although recommended by Eugenio Franchino (*Gaz. Sarda.*, 28, 1858) as a general anæ-

thetic in place of chloroform. First used by English physicians in form of ointment for exanthema; used by Lichtfield in porrigo and lepra; by Glover for psoriasis, impetigo, scabies, etc.; also recommended for croup (internally), and used with good success (*Monthly Journal*, Feb., 1848). On the recommendation of Moretin and Moutard (*l'Union*, 1857), used as a local anæsthetic, in the form of suppositories, in the prostate; it also seems to relieve tenesmus, easing defecation.

Iodoform has lately been prominently brought to the notice of physicians in this country as a remedy for chronic ulcers (Proc. Penn. State Med. Soc., 1868), obstinate neuralgia, scrofula, strumous ophthalmia, consumption, and even in cancer is stated to have relieved the excruciating pain of this malignant disease, without seeming to arrest the same (*Med. and Surg. Rep.*, Phil., Vol. 16, 17, 18). It is also a valuable dressing in chancre.

It is best administered in pill form, one to two grains, three times a day. Quevenne's iron may often be advantageously added. Externally it is used as an ointment, one-half to one dram of iodoform to one ounce of lard, or it is dissolved in hot alcohol, and glycerin added: these to be used *pro re nata*.—*The Pharmacist*, January, 1871, from *Detroit Rev. of Medicine*.

GLYCERINE EXTRACTS OF PEPSINE AND OTHER FERMENTS.

Mr. M. Foster reports, in *Nature*, the result of a repetition of some experiments, published a short time ago by Von Wittich in *Pflüger's Archiv*, upon the isolation of pepsine and other so-called ferments by means of concentrated glycerine.

After washing the mucous membrane of a pig's stomach, it was freed as much as possible from water, minced, bruised, and covered with pure glycerine. Having stood twenty-four hours, a few drops of the glycerine, diluted with acidulated water, digested fibrin rapidly. This process was repeated four times, each resulting extract manifesting strong peptic powers. Treated, after filtration, with an excess of alcohol, these extracts gave a slight precipitate, which, separated by filtration and redissolved in acidulated water, was strongly peptic.

Salivary gland and pancreas yielded to glycerine a starch-converting ferment, and a "laden" pancreas gave a ferment digesting fibrin in an alkaline medium. Ungerminated barley gave up a non-proteid diastase; almonds a ferment acting on amygdalin.

The author thinks that glycerine offers advantages in the investigation of this subject not presented by any other medium, as the extracts remain unchanged for a long time, while the tissues, being little altered after exhaustion of their ferment by repeated treatment with glycerine, may be examined under conditions hitherto impossible. He claims that these results are also of practical value in the preparation of the so-called pepsin for medical purposes; as by glycerine a pure palatable peptic liquid, apparently keeping any length of time and certain in its action, can easily be obtained.—*Pharm. Journ., Lond., Jan. 7, 1871.*

PROCESS FOR PREPARING LIQ. FERRI TERSULPHATIS AND
LIQ. FERRI SUBSULPHATIS, U. S. P., WITHOUT THE FORMATION OF NOXIOUS GASES.

BY J. CREUSE, of Brooklyn, N. Y.

The best method for preparing the persulphates of iron perfectly pure is, undoubtedly, to run a stream of chlorine gas through a solution of the protosulphate previously acidulated with the proper quantity of sulphuric acid. But this is obviously impracticable to most pharmacutists. The Pharmacopœia of the United States prescribes to oxidize the protosulphate of iron by means of nitric acid, a certain proportion of sulphuric acid being added. This is more practicable, and yields a good product, but is liable still to several objections. Expensive vessels are required for boiling a mixture of sulphuric and nitric acids; a good draught is also necessary for the escape of the nitrous fumes, and very often during the operation the vessels are broken, or the operator is annoyed by the poisonous gases escaping into the room. For these reasons, many pharmacutists prefer to buy the articles ready made; they have to pay a high price for it, and to depend on the manufacturer for its strength and purity.

I propose this new method, by which any pharmacist may prepare his own Liq. Ferri Tersulphatis or his Liq. Ferri Subsulphatis on his very prescription-desk, if need be, and with the usual implements found in all drug-stores.

R Sulphate iron in coarse powder, twelve troyounces.

Sulphuric acid, two troyounces and sixty grains.

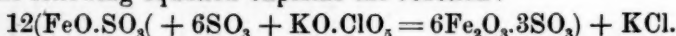
Chlorate of potassa, three hundred and forty-eight grains.

Boiling water, twelve fluidounces.

Dissolve the sulphate of iron, in the boiling water, in a glass mat-

rass, or any convenient bottle. Add the sulphuric acid gradually, and, while the liquid is hot, add the chlorate of potassa by small portions. When all is dissolved, filter and complete twenty-four fluidounces. The whole operation need not take more than fifteen minutes.

The following equation explains the reaction :



This process has the advantage of giving out no fumes or smell of any kind ; the product is free from any acidity but what belongs to the salt itself.

It is true the persulphate of iron thus obtained contains a small quantity of chloride of potassium, but this does not interfere with any of the uses for which it is wanted by the pharmacist. I think that the nitric acid always present in the preparation of U. S. P. is much more objectionable. Besides, any one who has followed the U. S. P. process knows that it is always when one tries to get rid of the last traces of nitric acid that the porcelain or enamelled dishes are broken.

A slight modification of the formula will give the Liquor Ferri Subsulphatis U. S. P. :

- R Sulphate of iron, coarse powder, twelve troyounces.
Sulphuric acid, one troyounce and thirty grains.
Chlorate potassa, three hundred and forty grains.
Boiling water, ten fluidounces.

Operate as above, and evaporate to twelve fluidounces. Filter.—
The Physician and Pharmacist, Feb. 1871.

ON THE USE OF WAX, TALLOW, ETC., IN SUPPOSITORIES.

BY CHARLES L. EBERLE.

(Concluded from last number.)

Slow manipulation with a mixture of wax and cacao-butter before hardening, we can readily understand, would cause a granulation of the wax, and produce a cone in which the heat to which it is to be subjected would act only upon the cacao-butter, to the exclusion of the wax, which would then remain unchanged, causing irritation and difficulty ; but we are only supposed to be dealing with mixtures which have been well stirred to the time of their introduction into the mould, which mould has been thoroughly chilled, and the suppository likewise. Under such circumstances the mixture is uniform and per-

fect, and shows no disposition to separate on fusion, if the heat be maintained at that point.

The difficulties in a proper understanding of the preparation of suppositories without the addition of a hardening ingredient in connection with cacao-butter have been solely those of manipulation.

Experience is leading many to prepare the excipient with a smaller proportion of wax, spermaceti, &c., than they at first thought necessary, until the quantity used by some is so trifling as to practically amount to little or no use.

Of the various mixtures, those of one-eighth spermaceti or one-fourteenth or less of wax are least objectionable. Tallow suet or paraffine produced no results not secured by the first-mentioned, while there were some objections to be attached to their use not present in the others.

Now while some have discovered points of manipulation to make these suppositories of *cacao-butter alone*, rapidly and well (and how much often hangs upon a very slight thread in this respect), far exceeding in value those I am about to offer to you, I will simply state the mode which gives me the most satisfactory result.

The mould is of brass; a clamp hinged at one extremity and handled at the other, held firmly in place by a ring slipped over said handles; the cones are turned from the interior face of the clamps, as in an ordinary bullet-mould. It should mould at least one dozen, and be improved by the addition of a loose clamp, to be attached firmly in the centre and at the bottom of so long a tool, to prevent the loss of the fused mass before congealing, by running from between the plates.

This mould should, so far as possible, be thoroughly chilled and ready for use. To place the fused butter in the mould while it is warm, and cool both by the same operation, almost invariably results in the contraction of the metal upon the cool cone to a degree that upon the attempted separation of the matrix every cone will be split in two. When the mould is thoroughly cooled, the butter sets rapidly, and in fifteen or twenty minutes the suppositories will drop from the matrices by their own gravity.

The deductions I draw from a close observance of this subject for the past two years are, that the addition of a substance such as wax, spermaceti, &c., to cacao-butter produces a mixture requiring a higher point of heat for its fusion, and in proportion to the amount of such

addition; and that when such addition is made, if it should not be sufficient to prevent the fusing of a suppository at animal temperature, no irritating or harmful effect is produced either upon the vagina or urethra. Where a larger quantity than that mentioned above is added, the annoyance produced requires the removal or ejection of the suppository before any harm may be done.—*Proc. Amer. Pharm. Assoc.*, 1870.

Philadelphia College of Pharmacy.

THE ANNUAL COMMENCEMENT of the fiftieth session of the Philadelphia College of Pharmacy was held on Wednesday evening, March 15th, 1871, at the American Academy of Music. The degree of Graduate in Pharmacy was conferred on the Graduating Class by the President of the College, Dillwyn Parrish. Seven of the graduates were passed at the June examination, 1870, the remainder (62) at the present March examination.

The Valedictory Address, made by Prof. Edward Parrish, was appropriate to the occasion, and very well received.

The public presentation to the College of a portrait of Prof. John M. Maisch by the Graduating Class, was prevented by a misunderstanding, by which the picture was not sent to the Academy.

The usual liberal donation of bouquets, and other presents of books, etc., to the graduates from their fair friends, was observed, and it was curious to notice the usual variableness which marked the gifts of fortune to the donees, yet we believe all were remembered.

By order of the Board of Trustees, the Report of the Examining Committee and the list of queries are published, and are as follows:

To the Board of Trustees of the Philadelphia College of Pharmacy.

The Professors and the Examining Committee respectfully report that the following 62 candidates have passed the examination and are, therefore, recommended for the degree of Graduate in Pharmacy. Their names, in the order of their merit, commencing with the most meritorious, are as follows:

NAME.	STATE.	THESIS.
Chas. F. Bolton,	Pennsylvania.	<i>Benzoating Ointments Extemporaneously.</i>
Robert Simpson,	"	<i>Preservation of Pharmaceutical Apparatus from Breakage by Sudden Changes of Temperature.</i>
Charles D'Invilliers,	"	<i>Preparations of Iron.</i>
John D. Owen,	Kentucky.	<i>Subnitrate of Bismuth.</i>
Stewart Kellam,	Texas.	<i>Liquor Plumbi Subacetatis.</i>
George C. Lippincott,	New Jersey.	<i>The More Recent Products of Pharmacy.</i>
John B. Raser,	Pennsylvania.	<i>Pharmaceutical Ethics.</i>
Charles C. Sniteman,	Illinois.	<i>Phytolacca Decandra.</i>
John F. Hunecker,	Pennsylvania.	<i>Sabbatia Angularis.</i>
Edward T. Hehr,	"	<i>Fructus Cardui Mariani.</i>
C. Hill Brinton,	"	<i>Unguenta.</i>
Julius Jungmann,	"	<i>Uva Ursi.</i>
Wm. G. Ewing,	Tennessee.	<i>Suppositories.</i>
James A. Jeffries,	Pennsylvania.	<i>Brayera as a Remedy for Tapeworm.</i>
Louis Shaw,	"	<i>Nitroprusside of Sodium.</i>

Emmor H. Lee,	New Jersey.	<i>Extractum Rhei Fluidum.</i>
Edgar C. Gramm,	Pennsylvania.	<i>Asimina Triloba.</i>
Joseph Anthony,	Virginia.	<i>Emulsions.</i>
Thomas H. Potts,	New Jersey,	<i>Nepeta Cataria.</i>
John L. Beeler,	Ohio.	<i>Examination of a Silver Ore.</i>
Fred. C. Weber,	Illinois.	<i>Acidum Arsenicosum.</i>
Aaron Stern,	Pennsylvania.	<i>Potent Medicines.</i>
Charles E. Roberts,	"	<i>Oleoresina Filicis.</i>
A. J. Odenwelder,	"	<i>Falsification of Drugs.</i>
Charles J. Kadish,	Illinois.	<i>Comprehension and Classification of Poisons.</i>
John A. Weaver,	Pennsylvania.	<i>Baptisia Tinctoria.</i>
T. Ellwood Conard,	"	<i>Cimicifuga Racemosa.</i>
John T. Viley,	Kentucky.	<i>Crab Orchard Salt.</i>
Harrison Duffield,	Pennsylvania.	<i>Uria.</i>
J. Thomas Hoskinson,	"	<i>Adiantum Pedatum.</i>
Richard W. Hickman,	"	<i>Cimicifuga.</i>
Frank Plunkett,	"	<i>Quilla Saponaria.</i>
Aug. A. Richards,	"	<i>Sarch.</i>
C. G. A. Loder,	"	<i>Senecio Vulgaris.</i>
Oliver Eberhart,	"	<i>Stramonium.</i>
J. Niven Scouller,	"	<i>Tela Araneæ.</i>
Michael J. Cummings,	"	<i>Action of Chlorides on Calomel.</i>
H. Clay Webster,	New Jersey.	<i>Products of the Vegetable Kingdom.</i>
William Weber,	Pennsylvania.	<i>Catalpa Bignonoides.</i>
Barclay Johnson,	"	<i>Percolation.</i>
Emmot Kannal,	Indiana.	<i>Humulus Lupulus.</i>
George D. Kressler,	Pennsylvania.	<i>The Requisites of a Druggist.</i>
John W. Wood,	Delaware.	<i>Tinctura Ferri Chloridi.</i>
E. D. Snyder,	Ohio.	<i>Aqua.</i>
Joseph Kaufman,	"	<i>Liniuentum Ammonis.</i>
George R. Kuhn,	Pennsylvania.	<i>Cypripedium Pubescens.</i>
Parker P. Ink,	Ohio.	<i>Coccus Cacti.</i>
Hosea F. Seeley,	New Jersey.	<i>Hydrastis Canadensis.</i>
Wilnot Hansell,	"	<i>American Botanic Drugs.</i>
Selden W. Smith,	Pennsylvania.	<i>Pharmaceutical Advancement.</i>
John S. McElwee,	New Jersey.	<i>Hydrate of Chloral.</i>
Emiliano Causse,	Cuba.	<i>Pharmacy in Cuba.</i>
William Simms,	South Carolina.	<i>Fluid Extract of Ipecacuanha Root.</i>
Jerome A. Eldridge,	New Jersey.	<i>Adulteration of Medicinal Substances.</i>
Harry V. Camm,	"	<i>Solanum Dulcamara.</i>
J. W. Worthington,	Pennsylvania.	<i>Emplastrum Belladonnæ.</i>
Wallace B. Boyer,	"	<i>Cypripedium Pubescens.</i>
George R. Vernon,	"	<i>Percolation.</i>
John W. Harry,	"	<i>Rumex Crispus.</i>
Enrique Rubio y Diaz,	Cuba.	<i>Poisoning by Arsenic.</i>
J. Ehrman Lehman,	"	<i>Prinos Verticillatus.</i>
William C. Watson,	Pennsylvania.	<i>Preparation and Mode of Dispensing Drugs.</i>
*Wardle Ellis,	"	<i>Cimicifuga.</i>
*Francis Fox,	"	<i>Chimaphila Umbellata.</i>
*Howard B. French,	"	<i>Syrup of Guaiac.</i>
*George J. McKelway,	"	<i>Fucus Vesiculosus.</i>
*Edward D. Painter,	Delaware.	<i>Ung. Hydrarg. Nitratis.</i>
*Elliott D. Paxson,	Pennsylvania.	<i>Phenic Acid.</i>
*U. F. Richards,	New Jersey.	<i>Glycerin and its Uses.</i>

* Graduates of June, 1870, not arranged in order of merit.

ROBERT BRIDGES, JAMES T. SHINN, CHAS. BULLOCK.
EDWARD PARRISH, WILLIAM C. BAKES, A. B. TAYLOR,
JOHN M. MAISCH, Profs. Committee.

The Board having determined to change the method of examining candidates for the diploma from verbal to written queries and answers, arrangements were made in the two lecture halls so that the entire number of candidates could be seated at separate desks, so as not to communicate with each other. But one branch was considered each day, and each student had the printed questions before him, with paper and pencil. A professor was in each room, to reply to proper queries. As soon as a student announced the completion of his task he was taken to the ten specimens relating to the particular branch under consideration, and wrote the names of each according to his judgment. So that all the answers of each student to all queries and specimens was on record.

The following are the queries adopted for the present year :

CHEMISTRY. Prof. Robert Bridges, M. D. Session 1870—71.

- No. 1. Give the source, mode of preparation and the properties, including solubilities and tests of Iodine.
- No. 2. How is Muriatic Acid prepared? State its composition, its properties in the gaseous and liquid state, and its reactions.
- No. 3. What solutions of Ammonia are officinal? State their mode of preparation and specific gravities; also the chemical properties of Ammonia.
- No. 4. What officinal preparations are made from Iron and Sulphuric Acid, with and without the aid of Nitric Acid? Show, by equation, the reactions occurring in these processes.
- No. 5. Give a process for the preparation of Iodide of Potassium and state the rationale of it.
- No. 6. How is Phosphate of Soda obtained, what other salt or salts is it likely to be contaminated with, and how tested?
- No. 7. How is Nitro-Muriatic Acid made? In what respect does its chemical action differ from that of either acid used in making it, and why?
- No. 8. Give the characteristic tests for Sulphuric, Boracic, Nitric, Acetic and Phosphoric Acids and their soluble compounds.
- No. 9. How are the soluble salts of Baryta, Lime and Magnesia distinguished from each other by chemical tests?
- No. 10. What double tartarates are officinal and how are they made?

MATERIA MEDICA. Prof. John M. Maisch Session 1870—71.

- No. 1. Where and from which plant or plants is *Assafoetida* obtained? Describe its composition, commercial varieties and the usual adulterations.
- No. 2. Give a description of Sweet and Bitter Almonds? From what plants and from what countries are they obtained? What are their medicinal products and how obtained?
- No. 3. What is the source of *Colocynth*, where is it obtained and what is the cause of its shrivelled or plump appearance? Which part, and what percentage of the entire drug is rejected in medicine?
- No. 4. What is the origin of the commercial varieties of *Buchu* leaves, and how do they differ from all other officinal leaves?
- No. 5. State the country, source, constituents and properties of *Quassia* wood; how and in what doses is it administered?
- No. 6. State the area—geographical, horizontal and vertical—of the native distribution of the genus *Cinchona*; and how may the true and false *cinchona* barks be distinguished?
- No. 7. Describe the difference in the appearance and physical properties of *Serpeptaria* and *Spigelia*.
- No. 8. Give the outlines of the process for obtaining *Colechicia*, stating which part of the plant contains the largest proportion, and what are its chemical reactions?
- No. 9. What is the meaning of the terms: Root, Rhizome, Tuber and Bulb? Give examples of officinal drugs of each.
- No. 10. What are the botanical characters of the natural order of *Labiatae*? Name some medicinal herbs belonging to that order.

PHARMACY. Prof. Edward Parrish. Session 1870—71.

- No. 1. Give the number of minims in a fluid-ounce and in a pint, the number of grains in 12 troy ounces and in a pound *avoirdupois*; also the weight of a fluid-ounce of Water.
- No. 2. Give the proportions, doses, and modes of preparation of Camphor Water, Creasote Water, Bitter Almond Water, Infusion of *Buchu*, Infusion of Wild Cherry, Infusion of *Digitalis*, Tincture of *Digitalis*, Tincture of *Arnica*, Tincture of *Belladonna*,

- No. 3. Give the official names, menstrua, proportions and doses of the galenical preparations of Opium.
- No. 4. Give the process for Fluid Extract of Ipecacuanha.
- No. 5. Give the specific gravities of Stronger Alcohol, Alcohol, Diluted Alcohol, Stronger Ether, Ether, Chloroform, Acetic Acid, Glycerin, Spirit of Nitrous Ether, Syrup.
- No. 6. Give an outline of the process for preparing Sulphate of Quinia; also its solubilities and characteristic tests.
- No. 7. How is Gallic Acid prepared and how distinguished from Tannic Acid.
- No. 8. Give a formula for preparing a Castor Oil mixture.
- No. 9. What official pills contain Aloes? Give the composition of each.
- No. 10. What three official preparations contain Tartrate of Antimony and Potassa, and in what proportions?

The following specimens were submitted for recognition :

Chemistry.	Materia Medica.	Pharmacy.
Acidum Nitricum,	Senega,	Pulv. Ipecacuanhæ,
Acidum Citricum,	Aconiti Radix,	" Ext. Coloc. Comp.,
Acidum Oxalicum,	Augustura,	Mistura Assafoetidæ,
Potassii Bromidum,	Cascarilla,	Syr. Sarsap. Comp.,
Potassæ Bichromas,	Digitalis,	Tinct. Cardamom. Comp.,
Sodæ Boras,	Belladonnæ Fol.,	Tinct. Gentianæ Comp.,
Magnesiæ Sulphas,	Santonica,	Lin. Saponis Camph.,
Manganesii Sulphas,	Anethum,	Extract. Buchu Fluid,
Ferri Subcarbonas,	Capsicum,	Spir. Ætheris Comp.,
Æther.	Galbanum.	Spiritus Ætheris Nitrosi.

The above examinations were by the several professors.

In addition to these the Examining Committee, consisting of four members of the Board of Trustees, have also a special examination, two of the Committee serving each day, and direct their queries to the practical parts of pharmacy and the recognition of drugs.

SPECIAL REPORT OF THE COMMITTEE ON EXAMINATION.

The committee on examination respectfully report, that they have attended to the responsible duty assigned to them, and passed their judgment on seventy-one candidates for the honor of the Diploma of the College.

Your committee feel it their duty to call the attention of the Board to a deficiency of information in the case of a large number of candidates, in the practical details of chemistry and pharmacy.

The committee fear that there has been a *growing* laxity of attention on the part of employers in giving personal supervision to the instruction of the young men learning their business with them, and in encouraging them by study, and cultivation of habits of earnest attention to details, to train their minds to the exercise of all their faculties, instead of making their daily duties those of merely manual performance.

When we remember that an apprentice (under the code Ethics of the College) is taken for a term of three or four years, and that his pecuniary compensation is during that time hardly sufficient for his support, there appears to be a *moral obligation* on the employer to use due diligence in instructing his apprentice in such a way that *if he is not* well qualified for the responsible duties of his profession, the fault may not lay at the door of his instructor.

Impressed with these views, your committee would respectfully suggest that the Board of Trustees should call the attention of the members of the College to this important subject, and exhort them to a more systematic training of their apprentices, and by personal attention and stated examinations, endeavor to elevate the standard of information.

We all agree with Prof. Procter, "that no amount of tuition by lectures will be equivalent to that which the earnest student receives in the dispensing shop and practical laboratory, under the *personal* instruction of a well qualified pharmacist, who takes an interest in his pupil."

Chas. Bullock, James T. Shinn, William C. Bakes A. B. Taylor.	}	Committee.
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Chicago College of Pharmacy.

The School of Pharmacy of this College, reorganized in October last, has had a successful course under the new faculty, Profs. Blaney, Bartlett and Hambright. The class numbered thirty, of whom one was a lady. One of the class, F. M. Goodman, having attended a previous course, in Philadelphia, passed his examination and was duly graduated; he was a pupil of Mr. J. W. Mill. The prospects for the coming year are brightening.

THE ANNUAL MEETING.

The Chicago College of Pharmacy held its annual meeting at the rooms of the association, No. 77 Dearborn street, yesterday afternoon. The President, E. H. Sargent, occupied the chair.

Mr. Thomas Whitfield read the report of the Committee on Cabinet Specimens and Apparatus. It showed that though the number and character were very creditable, they could be improved upon. The report was placed on file.

The Committee on Examination reported that F. M. Goodman had been examined and accepted as a member.

Longer time was granted to the Committee on the Progress of Pharmacy.

The death of Arthur Rappelje, in Canada, was reported by the Committee on Deceased Members.

The report of the Committee on Lectures congratulated the society on the successes of the past year, and referred to the lack of apparatus and specimens with which to illustrate them. The report recommended the purchase of large maps of Europe, Asia and Africa, and also of works containing the history of drugs. Report received and placed on file.

The Secretary, Mr. Hambright, reported that a large number of members still claimed membership without paying their dues or otherwise conforming to the rules. Of the annual dues for 1870—71, some \$455 had been collected, \$50 on certificates and \$54 on naturalization tickets. Of moneys still due, some \$263 was yet to be collected. Of members admitted since March, 1870, there

had been 10; foreign honorary members, 2; home honorary members, 8; resigned, 1; deceased, 1. The roll at present contains 119 active members, 3 associate members and 15 honorary members. The orders drawn upon the treasury amounted to \$609.26. Report received.

The Treasurer reported that the cash in the treasury amounted to \$331; the receipts for the year had been \$757.33; expenses, \$694.26; balance, \$394.26. Report received and referred to the Auditing Committee.

The President then delivered his retiring address. He urged increased zeal and attention to the best interests of the society, and that proprietors should make it possible and convenient for their clerks to attend the lectures. The publication of *The Pharmacist* had met with much success, owing in great part to the exertions of Mr. Whitfield. A permanent home for the college must soon be had. In closing, Mr. Sargent resigned his office as President.

The Association then proceeded to an election of officers, with the following result:

President—E. H. Sargent.

Vice-Presidents—J. W. Ehrman, E. T. Schloetzer.

Treasurer—A. C. Vanderburg.

Secretary—G. M. Hambright.

Corresponding Secretary—Albert E. Ebert.

Board of Trustees—Thomas Whitfield, Henry Biroth, George Buck, N. Gray Bartlett, John M. Wilson, Joseph M. Hirsch, W. F. Blocki, T. H. Patterson, Henry Sweet and Thomas N. Jamison.

The meeting then adjourned.

Maryland College of Pharmacy.

The nineteenth annual commencement of this institution was held at the new Assembly Rooms, on the evening of March 10th at 8 o'clock. A large and intelligent audience was present, and music was discoursed by the fifth regiment band. The ceremonies were opened with a prayer by Rev. E. A. Dalrymple, D. D.

Prof. Thomas J. DeRossett, M. D., after reading the act of incorporation, said that in pursuance of the powers thus vested by the General Assembly of the State, the Maryland College of Pharmacy have heretofore conferred the degree of Doctor in Pharmacy on several of its members, and this evening the honorary degree of Doctor in Pharmacy is conferred on Prof. William Procter, Jr., Prof. John M. Maisch and Prof. Israel J. Grahame, of Philadelphia, and Prof. David Stewart, M. D., of Delaware.

Prof. DeRossett then announced the following list of graduates for 1871, viz:

John Baumgarten, Maryland,	Thesis	Gillenia.
Frank W. Blaney, "	"	Sanguinaria.
T. Briscoe Compton, West Virginia,	"	Achillea.
Henry W. Hanna, Maryland,	"	Syrupus.

Ferd. Lautenbach, Maryland,	Thesis, Glycyrrhiza.
John P. Piquett, "	" Matico.
Edward A. Smith, "	" Ipecacuanha.
John J. Stigelman, "	" Cochlearia.
Albert E. Thompson, "	" Stramonium.

The degree of Graduate in Pharmacy was then publicly conferred on the graduates by George W. Andrews, Esq., President of the College. It was also announced that the following first course students were entitled to honorable mention, viz.: N. S. Pursell, of Virginia, John B. Thomas and J. H. Tucker, of Maryland, and Louis C. Roehle, of Germany.

The valedictory address, replete with practical advice to the young men, was then delivered by Prof. Claude Baxley, M. D., which concluded the ceremonies, and the audience adjourned.

The examinations of the Maryland College are conducted in writing and are applied to the first class students as well. Under the new Law this school of Pharmacy must soon attain a solid and influential status in Baltimore and its vicinity.

College of Pharmacy of the City of New York.

The annual meeting of this College was held at its Rooms in the University Building, March 16th, 1871.

The President, Mr. Wm. Hegeman, after addressing the Graduating Class, conferred the Diploma of Graduate in Pharmacy upon

William F. Brandt,	Henry C. Porter,
Theodore M. Bung,	Louis Riegel,
Edwin Heues,	Joseph A. Schwartzel,
Byron F. McIntyre,	Joseph Weber,
Thomas F. Main,	Conrad Wienges.

Mr. Edwin Heues received the prize of fifty dollars offered by Prof. W. DeF. Day to the student passing the best examination in Botany and Materia Medica. The College prize of fifty dollars to the student passing the best general examination, was also awarded to Mr. Edwin Heues. On behalf of the class Mr. Thomas F. Main responded, and handed the President an engrossed copy of the following resolutions:

At a meeting of the Students of the College of Pharmacy of the City of New York, held at their Lecture Room, Friday evening, March 10th, 1871, the following resolutions were unanimously adopted.

Resolved, that the sincere thanks of the class of 1870-71 are due, and are hereby tendered to the Lecture Committee and Officers of this College, for their efforts in securing to this class the excellent Lecturers to whom we have listened during the past session, as also for the many advantages offered for our instruction.

Resolved, that to Professors E. R. Squibb, C. F. Chandler, and W. DeF. Day, we return our hearty thanks for their kind attentions to the class, for their eminently instructive and entertaining Lectures, and for the kind and generous

manner in which each placed extra time and lectures at our disposal. Also for the Lectures delivered at the School of Mines by Prof. C. F. Chandler, by Prof. E. R. Squibb at his Laboratory, and the attractive illustrations of Botany and Materia Medica by Prof. W. DeF. Day.

Resolved, that we cordially commend the course of instruction to our fellow pharmaceutical students, and trust they will avail themselves of the excellent opportunity offered.

Resolved, that a copy of these Resolutions be sent to the President of the College, and that they be published in the pharmaceutical journals.

The Treasurer's report shows an excellent financial condition, but an effort is being made to increase the available resources of the College, which, it is hoped, will prove successful. The election of officers for the ensuing year then took place, which resulted as follows :

President, William Hegeman.

Vice-Presidents, Theobald Frohwein, Isaac Coddington, Wm. Neergaard.

Treasurer, William Wright, Jr.

Secretary, Edward L. Milhau.

Trustees, Paul Balluf, H. A. Cassebeer, Jr., P. W. Bedford, John Frey, John W. Shedden, Geo. C. Close, David Hays, A. W. Weismann.

As delegates to the meeting of the American Pharmaceutical Association in St. Louis in September next, P. W. Bedford, E. L. Milhau, William Hegeman, M. L. M. Peixotto, William Wright, Jr.

Minutes of the Philadelphia College of Pharmacy.

The Annual Meeting of the Philadelphia College of Pharmacy was held at the College Hall, March 27th, 1871. Dillwyn Parrish, President, in the chair. 40 members present.

The minutes of the last meeting were read, corrected and adopted. The minutes of the Board of Trustees were read by A. B. Taylor, Secretary of the Board, and approved.

The following report was read :

To the Philadelphia College of Pharmacy.

The committee appointed to propose the name of a suitable person for Editor of the American Journal of Pharmacy entered into correspondence with prominent pharmacutists in other cities, but having failed to obtain a favorable response, a majority of the committee, after due consideration, unite in offering the name of Prof. John M. Maisch, of Philadelphia, for election to that office.

CHARLES ELLIS,	} A majority of the committee.
WILLIAM PROCTER, JR.,	
CHAS. BULLOCK,	

Philadelphia, March 25, 1871.

On motion the report was accepted.

The following report from the Committee on Sinking Fund was read :

The Committee on Sinking Fund respectfully report that they have received from the professors, as tax on tickets, . . . \$1268 75

and have paid to Messrs Powers & Weightman, on acct. of mortgage, \$1250, with interest on it, \$18 75, . . . 1268 75
 They have also purchased one certificate of college loan, . . . 100 00
 And have in bank, to the credit of the fund, . . . 48 00
 There is also due the Sinking Fund, from matriculation fees, . . . 380 00
 which will, it is expected, be paid in a few days.
 Per Committee,

T. S. WIEGAND, *Chairman.*

The Librarian reported as follows :

The Librarian respectfully reports that he has been occupied in arranging, indexing and binding the manuscript theses in possession of the College; in this work he has been ably assisted by Messrs. Joseph P. Remington, S. Mason McCollin and H. D. Schell. The theses have all been bound and are ready for the backs and labelling.

He charges himself with cash received from Saml. F. Troth, late chairman of Library Committee, \$133 78
 Interest, 1 40

\$135 18

He asks credit for expense of binding, paper, title pages, &c., . . . 86 26

Leaving balance on his hands, \$48 92

And stock to value of 20 00

March 27, 1871.

The Publishing Committee reported as follows :

To the Philadelphia College of Pharmacy.

The Publishing Committee respectfully report that the several recommendations of the Committee, which were adopted in December last, have been carried out as follows :

1. The business pertaining to the Journal is all now transacted in the College building; the correspondence of the Journal is directed there, and, to a considerable extent, the exchanges are received there. As soon as the present Editor retires from service (April 1st) all the exchanges will be received at the College.

2. The Journal has been published monthly, three numbers having appeared, and the April number is ready to be closed with the minutes of this meeting.

3. A business Editor, Henry H. Wollé, has been appointed to attend to the advertising sheet, the distribution of the Journal by mail and otherwise, to attend to the business correspondence relating to the Journal, to keep the accounts in regular form, to make the collections and to pay the funds over to the Treasurer of the Committee, which duties he has carried out.

4. The authority to draw on the Treasurer of the College for the prime cost of Journals supplied to members, and as exchanges, will be carried into effect when the Committee are able to decide what is the proper sum to be charged.

The Committee were desirous to make a full report on the stock of the Journal, but the necessary time required to count all the numbers could not be devoted until the temperature of the stock room was milder than it has been through the winter.

They have, however, counted the volumes, which will give some idea of the amount of stock on hand :

There are 6 sets of 30 volumes each, not all consecutive.

3	"	33	"	"	"	"
5	"	28	"	"	"	"
1	"	32	"	"	"	"

15 sets 441 volumes.

There are twenty-six perfect volumes, varying in number from 1 or 2 to 129 each, making 1116 volumes, which, added to the volumes in sets, makes a total of 1557 volumes. These, at an average of two dollars each, make a sum of \$3114.

The remainder of the stock consists of a large quantity of odd numbers, in bulk equal to one-half of the perfect volumes. In some instances there are only one number missing, in many several numbers are required to complete the volumes. The business Editor has been requested to keep himself informed of those volumes nearly complete and buy numbers when they offer to complete them.

There are also a numerous collection of exchanges, mostly medical journals, but few of which are complete, and but few of a character suitable for the library, yet there are several exceptions, and these have been kept together.

The Committee are pleased to be able to say that the Treasurer's report, hereto appended, exhibits the very satisfactory balance of \$1424 in favor of the Journal.

In reference to the debts due the Publishing Committee, the business Editor has carefully gone over the books and reports that there is due the Committee, from parties where subscriptions were stopped in 1869 and a few since, \$522, and from persons in arrears, who yet receive the Journal, \$1128. Making a sum of \$1648 outstanding in debts. Besides these there are some other accounts in dispute, which have not been brought forward because they need further investigation.

In conclusion, the Committee desire to express their satisfaction with the new business arrangement, and believe it will eventually give entire satisfaction to the College.

CHARLES ELLIS,	} Committee of Publication.
JOHN M. MAISCH,	
A. B. TAYLOR,	
THOS. S. WIEGAND,	
WILLIAM PROCTER, JR.,	

March 27, 1871.

On motion of James T. Shinn, the Publishing Committee were requested to report at the meeting in June next the amount of cash on hand, and the estimated expenses of the Committee for the remainder of the year.

The Committee on Deceased Members read the following notice of John Horn.

John Horn, a member of this College since 1826, was born in the City of Baltimore, of German parentage, September 9th, 1803. His early education was received at St. Mary's College, Baltimore. He came to Philadelphia about the year 1820, and served his apprenticeship to the drug business with Matthias Pleis, whose place of business was located on 2d street below Brown. Matthias Pleis was a German emigrant, whose redemption was purchased by one of the Lenning family, and whom he served for a period of 3 years and 9 months.

In December 1823, John Horn commenced business on his own account at the N. E. corner of 3d and Brown, the property having been purchased for him by his father. This property was known at the time as the "haunted house;" during the war of 1812 it was rented as a rendezvous or barracks for soldiers. At the time he opened his store, there was no other drug store between the Delaware and Schuylkill, on Brown street, and none north of him until coming to that of Henry J. Squire, in Germantown.

So great was the success of John Horn, that he repaid the purchase money of the property from the profits of his first year of business, and being of a money making turn, he accumulated means rapidly. At the S. E. corner of 3d and Brown was an old family cemetery, known as the Coates and Brown family cemetery, occupying nearly one fourth of the square. This was purchased

by John Horn, who erected thereon what is known as Horn's Hall, together with the buildings. As one of the largest share holders in the Northern Liberty Gas Company, John Horn realized large profits from that successful enterprise, and was enabled to defray the expenses of the erection of the buildings on the cemetery lot, from the proceeds of one year's dividend of said Gas Company. His favorite motto was "that it was better to wear out than to rust out," and was consistent to his motto in his active business strife. He was at one time a member of City Council, and was a director in the Manufacturers and Mechanics Bank, also in the County Fire Insurance Co., and was the largest shareholder in the 2d and 3d streets and Green and Coates streets railroads. He was also connected for many years actively with the Northern Dispensary.

Although his health was impaired and threatened with pulmonary difficulty from neglected colds, he continued to visit his store, and attend to business until within a few days of his decease. He was thrice married, and leaves a widow and three daughters. He died on the 26th day of December, 1870, and was buried at Laurel Hill.

The Committee on Latin Labels reported a balance in favor of the committee of \$271 10. They also reported that they had concluded it inexpedient to publish any further editions of labels at present.

The following communication was read, addressed to the Secretary.

"Herewith we send specimens of the chemicals exhibited at the Semi-Centennial Anniversary on the 23d of February last, which please have placed in the cabinet of the College.

With best wishes for the prosperity of the Institution which has done so much for Pharmacy in this country, and hoping to exhibit again at the centennial, we are,

Very respectfully yours,
ROSENGARTEN & SONS."

The specimens, 23 in number, were handsomely put up, and bore labels setting forth that they were exhibited at the semi-centennial anniversary, Feb. 23d, 1871.

On motion, the Secretary was requested to return the thanks of the College to Messrs. Rosengarten & Sons for their interesting and valuable donation.

Wm. Procter, Jr., called attention of the College to a bill before the Legislature of Penna., designed to appoint an examiner of drugs for this State. As a copy of the proposed enactment had not come into the possession of any member of the College, it was deemed expedient that the College should keep itself informed of the purport of said bill. The following resolution was accordingly adopted.

"Resolved, that in view of a Bill being before the State legislature in relation to Pharmacy, that a committee of three be appointed to look after said bill, and if objectionable, to use proper endeavors to prevent the passage of the same."

The chair appointed James N. Marks, chairman, John M. Maisch and Robt. Shoemaker to that service. On motion, the President and Secretary were added to the committee.

On motion, a resolution was adopted, appointing Chas. Ellis, A. B. Taylor and Chas. Bullock a committee to obtain from the Solicitor of the College his

opinion as to the officers of the College who are, *ex officio*, members of the Board of Trustees.

The annual election being ordered, the chair appointed S. Mason McCollin and William B. Webb tellers. As the nominations were being made, Chas. Ellis asked to be relieved from further service on the publishing committee. A ballot being ordered, the tellers announced the election of the following officers:

President, Dillwyn Parrish.

1st Vice President, Wm. Procter, Jr.

2d Vice-President, Robert Shoemaker.

Treasurer, Ambrose Smith.

Recording Secretary, Charles Bullock.

Corresponding Secretary, Alfred B. Taylor.

Eight Trustees, (to fill the vacancies occurring at this date.) Robert Bridges, M. D., T. Morris Perot, S. S. Bunting, James T. Shinn, Daniel S. Jones, John M. Maisch, Thomas S. Wiegand and Joseph P. Remington.

Publishing Committee, Wm. Procter, Jr., chairman, Charles Bullock, John M. Maisch, Alfred B. Taylor and T. S. Wiegand.

Committee on Sinking Fund, Thomas S. Wiegand, T. Morris Perot and James T. Shinn.

Editor, John M. Maisch.

Librarian, Thos. S. Wiegand.

Curator, Jos. P. Remington.

On motion, then adjourned.

CHARLES BULLOCK, *Secretary*.

Minutes of the Pharmaceutical Meetings.

March 21st, 1871. The meeting was called to order by the President, and the minutes of last meeting adopted.

Mr. Boring exhibited a specimen of Compound Syrup of Sarsaparilla as improved by the addition of glycerin in place of part of the sugar. Several specimens from the large natural deposit of Phosphates, recently utilized by the Charleston, S. C., Mining and Manufacturing Company, were presented. Some of these are bones, vertebra, &c., of large animals, but others appear of irregular and indefinite shapes, so as to obscure their origin. The quantity of this material is immense, and it is readily obtained near the surface. According to the published analysis it contains about 29 per cent. of phosphoric acid, equal to about 63 per cent. of bone phosphate of lime; its chief use at present is in the fabrication of fertilizers. The subject was referred to Mr. Boring.

Prof. Maisch exhibited samples of *Vanilla planifolia*—Bourbon Vanilla. This variety does not possess the same delicacy of odor as the Mexican. The bean differs from the Mexican, being shorter, wider and terminating more abruptly at the ends. The price of this variety is \$5 to \$6 per pound.

Prof. Maisch made some remarks upon several varieties of Rhubarb not met with in our markets. These rhubarbs were grown in Austria, and marked *Rheum Emodi* and *Rheum Palmatum*; they are cultivated to a considerable extent, principally for dispensing to the poor, being very much cheaper in

price. The sample was handsome in appearance, and sold at \$5 to \$7.20, gold, for 108 pounds. This variety is so well prepared that it is very difficult, except upon close examination, to distinguish it from good Chinese rhubarb.

James T. Shinn presented a sample of Pure Oil of Citronella.

Mr. Gailard spoke of the Elixir of Pepsin, Bismuth and Strychnia, and the difficulty experienced by most apothecaries in preventing precipitation, and suggested forming a citrate of the quinia and strychnia with excess of citric acid, neutralizing the excess of acid with ammonia; by this means he obtained a satisfactory preparation. Some remarks were made upon Elixirs, particularly upon that of Iron, Quinia and Strychnia, which, as prepared by certain manufacturers, appears to be without unpleasant bitterness.

Remarks were made in reference to the stamping of proprietary articles and perfumes.

Then adjourned.

CLEMMONS PARRISH, *Registrar.*

Abstract of Minutes of the Alumni Association Of the Philadelphia College of Pharmacy, March 14th, 1871.

The meeting was called to order, President Wiegand in the chair. The minutes of the last annual meeting were read and approved. The minutes of the several meetings of the Executive Board were also read and approved.

Mr. Chas. L. Eberle moved to postpone the reading of the President's annual message until the session to-morrow.

The following names were proposed for membership:

John B. Raser,	Parker P. Ink,
E. D. Snyder,	Chas. F. Bolton,
C. C. Sniteman,	J. Willets Worthington,
Fred. A. Weber,	Chas. J. Kadish,
Dan. S. Fox,	Emmet Kannal,
Wm. Weber,	John D. Owen,
J. O. Oberhardt,	Wm. G. Ewing,
A. J. Odenwelder,	Geo. R. Kuhn,
John A. Weaver,	S. D. Barth Kuhn,
Emmor H. Lee,	John F. Hunneker.

An election was ordered, R. M. Shoemaker acting as teller, who reported their unanimous election.

The Treasurer's report was next read and submitted to the Auditing Committee, (Messrs. Newbold and Carberry) who reported that the report corresponds with the vouchers.

Mr. Jefferson made some remarks in reference to the sad accident to our late Vice-President, Ferris Bringhurst, (since deceased.) All the members present participating in the feelings of regret, the Secretary was instructed to enter upon the minutes this general and heartfelt sentiment of the Association.

The following members were appointed a Committee to nominate officers for the ensuing year:

E. Parrish,	Class of 1842.	S. Mason McCollin,	Class of 1864.
C. R. Keeney,	" " 1845.	P. Jos. L. Carberry,	" " 1867.
C. L. Jefferson,	" " 1859.	C. Parrish,	" " 1868.
R. M. Shoemaker,	" " 1862.		

Said committee to meet after the adjournment of this meeting, and to report at the next session.

At the second session, March 15th, the following officers were elected and installed :

President, T. S. Wiegand.
First Vice-President, C. L. Eberle.
Second Vice-President, R. M. Shoemaker.
Recording Secretary, Clemmons Parrish.
Corresponding Secretary, P. J. L. Carberry.
Treasurer, Ewd. C. Jones.

To fill vacancies in *Executive Board*, Carl Fröh and E. D. Paxson.

President Wiegand, in a neat speech, presented to Chas. F. Bolton the gold medal offered by the Association, as a prize to the graduate passing the best examination ; to which Mr. Bolton responded, stating that his intercourse with the College and those connected with it, had always been very pleasant, and thanking the Association for the honor conferred upon him.

The President's annual message was next read, receiving the applause of the members present.

Mr. W. C. Bakes proposed getting up a course of Lectures during the coming fall and winter, under the auspices of the Association, proceeds to be devoted to the Laboratory fund. This seemed to meet with the approval of the members present.

The Association heard with feelings of sorrow of the death of Ferris Bringhurst. The chair appointed Jos. P. Remington, W. C. Bakes, Rich. M. Shoemaker, C. L. Eberle and T. S. Wiegand to draw up suitable resolutions expressive of the feeling of the Association, to which he had been so long attached.

C. PARRISH, *Secretary*.

Editorial Department.

ANNOUNCEMENT. The Editor takes great pleasure in announcing to the subscribers and friends of this Journal that, at the Annual Meeting of the College, Prof. John M. Maisch was elected its Editor, and that he will commence his duties with the May number. Prof. Maisch has been so long and favorably known as a contributor to its pages, and as a true working man in our profession, that he needs no further introduction, and has our earnest good wishes for a useful and brilliant career.

PROF. MAISCH requests that all correspondence and communications intended

for him, as Editor of the American Journal of Pharmacy, be directed to him at the College of Pharmacy, 145 North 10th Street, Philadelphia.

THE RETIRING EDITOR TO HIS FRIENDS AND READERS.—The time having arrived when the Editor's resignation is to take effect, he may be permitted to say a few parting words to his friends and readers. Of the Journal itself he has little to say; whatever merits or faults his connection with its pages has had, may be known to all, and must receive the award which time will be sure to render. The path editorial has not always been found smooth and free from thorns; not a few instances have occurred where the line of duty has run very nearly athwart that of personal friendship, causing a feeling of soreness. At other times offence has unintentionally been given; yet, as the governing motive has been based upon a sense of rectitude, he has continued his course steadily onward, accepting the result. So far as is remembered, most of the wounds thus occasioned have kindly healed. That many errors in judgment have occurred is not improbable, and, in looking back over so long a record, there are many things that could now be better done, and some things omitted that should have been accomplished; yet, through all the happenings of this period, the constancy of the flow of friendly interest, which has reached him from members of the College and other friends, far and near, will ever be a source of grateful recollection and satisfaction; and to these he desires to extend his sincere acknowledgements, as well as to those editorial friends at home and abroad, who have recently spoken kind words in reference to his retirement from active service. In returning among his fellow-pharmacutists, the Editor disclaims the idea of ceasing to be a worker, and it is not improbable that he may occasionally claim a few pages as a volunteer, and in other ways to aid the cause of pharmacy.

THE PRACTICAL SCHOOL AT THE PHILADELPHIA COLLEGE OF PHARMACY.—This school was opened in October last by Prof. John M. Maisch under circumstances unfavorable to its immediate growth, the room not being ready when the lecture season commenced, and the apparatus and tests had to be obtained and prepared afterwards. Notwithstanding these drawbacks, eight young men took the course on Practical Pharmacy and seventeen that on Analytical Chemistry. The pharmacy course included the practical details of drying, powdering and sifting drugs for all purposes. Percolation (with the preparation of tinctures, fluids extracts, solid extracts, resins and oleo-resins). Distillation (with the recovery of alcohol and the preparation of distilled waters, spirits, etc., pill masses, pills, emulsions and other extemporaneous preparations, and finally the preparation and purification of pharmaceutical chemicals.)

The chemical course included proximate analysis and the preparation of proximate principles, (such as those of storax, opium, aconite, hydrastis and liquorice root), qualitative analysis of simple and complex compounds, inorganic bases, inorganic and the commoner organic acids, always with special reference to pharmaceutical wants.

The following is a list of the classes:

Class in Pharmacy.

E. C. Batchelor, Miss.
Jno. B. Elston, Mo.
Jas. F. Hurt, Mo.
Henry Kielhorn, Ind.
David J. Lewis, Pa.
Wren H. Light, Ky.
Henry Schmidt, O.
H. R. Thomson, Ind.

Class in Analytical Chemistry.

E. C. Batchelor, Miss.
Emiliano Causse, Cuba.
W. P. Carpender, Iowa.
Jul. Jungmann, Pa.
Ch. J. Kadish, Ill.
Jos. Kaufman, Ohio.
Sam. Lemly, Jr., Miss.
A. J. Odenwelder, Pa.
John C. Wells, Vt.
M. F. Rinehart, Ohio.
Ch. Saiteman, Ill.
E. D. Snyder, Ohio.
Aaron Stern, Pa.
Lanc. Thomas, Pa.
Henry R. Thomson, Ind.
J. A. Weaver, Pa.
Fred. C. Weber, Ill.

PHARMACY IN NEW JERSEY.—The *Newark Register* of March 6th contains a copy of a petition sent to the Legislature against the Registry Law, recommended and urged for adoption by the New Jersey Pharmaceutical Association. As the Association represents a large number of the best druggists of the State, the petition must emanate from those who are opposed to the reform suggested by the Association and, consequently, to that class who advocate free trade in drugs and poisons without reference to the public welfare.

PHARMACY IN RHODE ISLAND.—The Providence *Evening Press*, of Feb. 28, contains the report of the State Board of Pharmacy, after one year's experience of the pharmacy registering law of that State. The reporters inform that there have been six meetings for business, and for the examination of assistant pharmacists. Five of the meetings were held in Providence and one in Newport. Most of the persons examined exhibited a fair knowledge of pharmacy as obtained from the shops, whilst but few were familiar with chemistry and botany. One of the greatest difficulties presented in the report was that of the sale of liquors by apothecaries. Owing to the stringency of the U. S. Law, small quantities of liquors for medicinal purposes can only be sold by prescription, hence the apothecaries are compelled to obtain a license from the government, by which they become regular liquor dealers, and, in order to repay the expense of the license, cater for business regardless of the uses made of the liquors. A temptation is thus opened to promote the improper use of these agents, as well as to their use by employees. They therefore ask for some modification of the law which will enable the apothecary to supply the simple needs of medicine without being compelled to become liquor dealers in a legal sense.

They also submit a revised draft of the law, which covers some omissions, and pray for its passage as a substitute for that of 1870.

PHARMACY IN ILLINOIS.—Our friends in Chicago have just introduced a bill into the Illinois Legislature asking for a law to regulate the practice of pharmacy and the sale of poisons in the State of Illinois. The bill is modelled after that of the Association at the Chicago meeting. We shall be glad to hear of its acceptance at the hands of the wise men assembled at Springfield.

PHARMACY IN CALIFORNIA.—By an accident the "Proceedings" of the Annual Meeting of the California Pharmaceutical Society were placed out of sight and overlooked till just as we are closing this number. The Annual Meeting occurred on the 10th of October, at San Francisco. The Annual Report of the Executive Committee is an interesting document, embracing a

variety of topics, such as drug legislation, chemical manufacturing in California and several papers on special subjects. A series of queries were called up, but there were but few replies, most of them being continued. The annual election was held and the following officers elected for the ensuing year: *President*, John Calvert. *Vice-Presidents*, Wm. Geary and G. G. Burnett. *Treasurer*, Wm. Bryan. *Recording Sec.*, W. A. Perkins. *Correspond. Sec.*, Jos. G. Steele. *Exec. Com.*, Messrs. Geary, Simpson, Mayhew, Steele and Wenzell.

HIVE SYRUP.—The following note, received from Mr. J. C. Wharton, the author of a paper on *Compound Syrup of Squill*, &c., at page 101 of the March number, should be considered in connection with that article:—

NOTE.—It should be remarked that, in filtering through carbonate of magnesia, the first portions of liquid often pass through *cloudy* and should be returned to the filter until the filtrate is *quite clear*. This will insure a transparent syrup.

The Year Book of Pharmacy, comprising abstracts of papers relating to Pharmacy, Materia Medica, Therapeutics and Chemistry; contributions from British and foreign journals from July 1, 1869 to June 30, 1870, with the proceedings of the British Pharmaceutical Conference at the Seventh Annual Meeting, held at Liverpool, Sept., 1870. London. John Churchill & Sons. Pp. 592; octavo.

This volume originated from a resolution of the British Pharmaceutical Conference, and is intended to be issued annually. The funds for its support are supplied by the Conference, each member being entitled to a copy. The Editor appointed for the work was John Cargill Brough, formerly Editor of the *Chemist and Druggist*, but the serious illness of that gentleman rendered assistance necessary, which was given by Mr. Joseph Ince, Prof. Attfield and others.

The work is a sort of *opnium gatherum* of matters pharmaceutical, without any attempt at classification, and appears to have been printed from the papers of each contributor without any effort at assimilation. This makes the book very readable, but renders it difficult to consult without going to the index every time. The term "Year Book," would indicate to us a systematic record of the doings of the year in pharmacy and its collateral sciences, with full information on minor subjects of general interest. The title of the book does not limit it to any country, therefore, the treating of pharmacy in a sectional sense is hardly to be recommended, and in this instance is a complete failure, as we will attempt to show. The first chapter is entitled American Pharmacy, consisting of abstracts of notes made in the United States by a London pharmacist (Mr. Robert Howden), and consists of personal observations and inquiries made at Boston, New York, Chicago, Milwaukee, Cincinnati, Baltimore and Philadelphia. This notice is well written, and in the main correct, as far as it goes, but in many instances fails, from lack of information of the true condition of pharmacy. This is followed by a few "American Recipes," which, if viewed as representing American pharmacy (and the inference is unavoidable), gives as false an impression of the pharmaceutical ideas originating

in this country, within the year indicated, as could well have been selected, and as no explanation is offered, it must be inferred either that the compiler was almost wholly without authorities for reference, or that the whole chapter is an intentional caricature, set prominently in relief against the second chapter, called *English and Continental Pharmacy*, which, curious to relate, contains twenty recipes of American origin, more than are given in the American chapter itself!

The chapters on materia medica and chemistry are fuller and better than what precedes them, yet are nearly without reference to American items of materia medica. As the chapter on Bibliography gives no mention of the last and complete edition of the U. S. Dispensatory, published in Feb., 1870, this meagreness is probably due to want of authorities or of time to consult them.

At the end of the obituary chapter is placed an autobiographical notice of Henry Deane, of Clapham, which appears not to have been intended for publication, but which is well worthy the perusal of all young apothecaries who are striving for knowledge under difficulties.

The last half of the volume (about 300 pages) consists of the proceedings and papers of the British Conference Meeting, at Liverpool, and a chapter by Mr. Ince, called a century of old books, which, being paged separately, is probably to be had as a separate pamphlet of 100 pages, which is full of curious extracts of old time pharmacy and chemistry, and reflects great credit on the diligence of the compiler. In conclusion, we may be permitted to hope that the faults of this volume have arisen mainly from the unfortunate illness of its Editor and the necessity of his collaborators of hurrying up the work at the last moment, and that the next volume will exhibit more homogeneousness. We would also respectfully suggest that one of the really valuable points of a good "year book" is the faithfulness with which the printed sources of the information obtained is recorded, not only in name, but in volume and page, giving original sources when possible. In this respect the "year book" is seriously in fault, and will perplex the future historian of pharmacy who may aim to sift out the true sources of the information which it offers.

OBITUARY.

EUGENE L. MASSOT, whose death we published last month, together with resolutions of respect by a public meeting, was a native of Louisville, Kentucky, where, according to information from Mr. Hubert Primm, he was born in 1824, and afterwards learned the drug business in Galena, Illinois. In 1852 Mr. Massot commenced business in St. Louis, at 4th and Almond, moving subsequently to 4th and Spruce, where he afterwards continued. His business maxim was that, "honesty is the best policy," which, aided by his good business qualities, built up for him a large and profitable trade, and established a character for fairness and uprightness that won the confidence of the medical and pharmaceutical professions and the public. To him largely is due the credit of the establishment of the St. Louis College of Pharmacy on a firm basis, giving his personal exertions and money. Mr. Massot became a member of the American Pharmaceutical Association in 1857; was elected one of its vice-presidents in 1862 and again in 1870, and had he lived would probably have

been its next president. He will be remembered by all who knew him as an honest, upright man, as a good citizen, and as an earnest, disinterested advocate of pharmaceutical education and organization.

DR. F. A. G. MIQUEL.—*The Pharmaceutical Journal* announces the death of Dr. Miquel the eminent professor of Botany in the University of Utrecht, and director of the botanic gardens at Leyden. "He occupied a high rank among systematic botanists for many years. His numerous publications have been principally devoted to the elucidation of the plants of the dutch possessions in the Indian Archipelego, and of the flora of Japan and New Holland. He has also produced several monographs on particular families, such as the figs, peppers, cycads, etc." His *Annales Musie Botanici Lugduno-Batavi*, in 4 folio volumes, with splendid illustrations, is his greatest work. The exact time and place of his decease is not mentioned.

DR. JAMES SHERIDAN MUSPRATT, whose decease was noticed in our last issue, was born in Dublin, March 8th, 1821. His father removing to Liverpool, his education was carried on in that city. He early evinced a taste for chemistry, travelled on the Continent and afterwards entered the Andersonian University, at Glasgow, to study chemistry under Prof. Graham there, and afterwards at London. He visited the United States about 1842, and in 1843 entered at Giessen, under Liebig, remaining two years, when his labors won for him the title Ph. D., and for some time after pursued his studies in Germany. Dr. Muspratt founded a college of chemistry at Liverpool, which has been a useful institution. In 1854 he commenced his dictionary of manufacturing chemistry, by which he is best known. Dr. Muspratt was a member of several learned societies. In 1848 he married Miss Susan Cushman, the actress, who died in 1859. He was the scientific director of the chemical works at Flint, belonging to Messrs. Muspratt & Brothers, of which firm he was a member. He died, of a lingering illness, at the early age of fifty.

FERRIS BRINGHURST died on the 16th of March in the 34th year of his age, at Wilmington, Delaware, his native city, and the scene of his pharmaceutical labors. On the morning of the 11th of March our friend arose in the anticipation of carrying out an engagement to give a lecture on water before the "Workmen's Institute," and in the afternoon he set himself to work in preparing oxygen for its illustration. The apparatus used was a tube of wrought iron 3 inches in diameter and 5 inches long, the lower end closed with a plug shrunk in, the upper end with a wrought iron cap screwing on the outside of the rim. In the top of the cap, which was 2½ inches high, was an opening for charging the retort, closed with a screw plug. The neck of the retort, a curved piece of inch iron tubing 3 inches long, was screwed into the side of the cap with its projecting end opening upward, and extended by a joint of half inch tube bent at a right angle, connected with the gas bag tube. The usual charge was 5 ounces of chlorate of potassa with the proper proportion of black oxide of manganese, but on this occasion he had put in a larger charge to secure a full supply of gas. Mr. Bringhurst was operating in his laboratory on the premises, but not in the building where his store is located. He was alone, and from the

position of things after the explosion, it appears that he had placed the retort on the furnace, and when the reaction had commenced he had observed that the gas was not accumulating, and judging that the exit tube had become obstructed, he had lifted the retort off to the hearth, and had disconnected the gas bag, with the intention of removing the obstruction. The immense pressure of the constantly developing gas at this moment vented itself, whilst the operator was stooping over, by blowing off and shattering the whole top of the retort; the upper half of the neck tube, in ascending struck his forehead immediately above the left eye, burying itself several inches in the brain. The explosion was heard some distance, arousing the whole neighborhood. His father, Edward Bringham, Sr., and his partners, E. Bringham, Jr. and Z. James Belt, were all in the store, and hastening to the laboratory, a fearful sight was presented. Ferris Bringham was lying against a barrel, several feet from the furnace, the blood streaming from the frightful wound in his forehead, and all around bearing evidence of the violence of the explosion, every window being broken. He was carried to the yard, medical aid summoned, and by advice removed at once to his residence on West street. On Monday a piece of iron $2\frac{1}{2}$ inches long was removed. He never spoke, being in a stupor, yet at one time he seemed to retain some consciousness, and though unable to articulate, showed by pressure of the hand that he understood what had been said to him. He gradually sank, and early on Thursday morning, the 16th of March, quietly passed away without, probably, at any time having suffered pain. Thus early has closed the earthly career of one of the brightest minds, in the wide circle of American pharmacutists, it has been our privilege to know, admire and love. So genial, so true and earnest, so thorough and reliable in all that he did, so unselfish and generous in his intercourse with his professional brethren, so free from self-seeking and petty ambition in his endeavors for the advancement of the interests of pharmacy.

Ferris Bringham attended the lectures at the Philadelphia College of Pharmacy at the sessions of 1855—1856 and 1856—57; during his attendance he placed himself under the care of Dr. F. A. Genth in the study of analytical chemistry, and acquired those nice habits of manipulation for which as a pharmacist he was noted. He graduated in the spring of 1857, and subsequently became a partner in his father's business. He stood among the very foremost in the esteem of the American Pharmaceutical Association, which he joined in 1862 at the meeting in Philadelphia, and ever since has been an active and useful member, having, as Vice-President, been acting President at the Chicago meeting. He was also a prominent member of the Alumni Association of the Philadelphia College of Pharmacy, and had he lived two weeks longer he would have been elected a member of the Philadelphia College of Pharmacy under the new Constitution, having been proposed at the last meeting.

Ferris Bringham, though a young man, had moral excellencies, intellectual capabilities, and manly energies that were appreciated by those who knew him well, and which, had he lived, would have developed in the Association to its great advantage, for its true interests were dear to him, and he was prodigal of his labor in a good cause."

He was the President of the Wilmington Fountain Society, and also of the

Young Men's Free Library and Reading Room" association, and took a deep interest in promoting the instruction and elevation of the "working people" of his native city. The accident which cost his life happened in carrying out his benevolent intentions towards this class, in a scientific lecture on the properties and composition of water, to have been delivered free of cost to the Institute.

Ferris Bringham was also a good man. An editorial fellow townsman has said that he was "honored and respected by the whole business community, loved by a large circle of relatives and friends, remembered with gratitude by hundreds to whom his liberal helping hand has been extended again and again, in accordance with a systematic and careful habit of charity."

"All who ever came in contact with him will testify to his kindness of heart and suavity of manner. We have known him from his school days up to his death, and knew him as a moral, upright man, whose early manhood even was free from blot or blur, conscientious in the performance of his duties, just in his dealings with others, charitable to the suffering and the needy and who had a pleasant smile and a kind word for all."

For him, therefore, there is nothing to regret, for his was a useful and blameless life followed by a painless death, in the path of duty amidst the work he loved, and surrounded by those who loved him; but for the dear ones he leaves behind in the family circle, and especially her who was the chosen and happy companion of his pathway through life, the dispensation is grievous and hard to bear.

As we joined the sorrowful company who followed his remains to their last resting place by the beautiful Brandywine, we felt that the grave had indeed robbed our profession of one of its brightest ornaments and most earnest advocates.

THE ALUMNI ASSOCIATION of the Philadelphia College of Pharmacy have heard with feelings of deep regret of the sad accident, which has since resulted in the death of our much beloved colleague, Ferris Bringham, of Wilmington, Delaware, and the meeting desired the undersigned committee to express their feelings of sorrow at the loss of one with whom all had been associated so pleasantly.

We cannot recall a single instance in which his sympathies and actions were not at once enlisted on the side of truth and justice; and in his quiet, steady opposition to deception and insincerity, or indeed anything that would hinder the progress of the science he loved, or lower its standard, we see the manifested fruit of an inner life that was unselfishly engaged in benefitting his fellow men; though the accident which resulted in his death was a most painful one, our grief is mitigated by the thought that he was engaged, at the time, in the most laudable calling of serving his fellow man, and another name has been added to that list of martyrs who have lost their lives in various ways by generous self sacrifice.

We do most sincerely sympathize with the bereaved and afflicted family, and whilst we feel that we have lost a noble co-laborer, and will sadly miss his cordial greeting, his genial smile, and his polished pleasantry, we bow in submission to the will of our Father in Heaven, who doeth all things well.

Signed,

JOS. P. REMINGTON,
WM. C. BAKES,
RICHARD M. SHOEMAKER,

THOS. S. WIEGAND,
CHAS. L. EBERLE,
Committee.